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THE INCAS.*

THE publication of some of the biographies of the chief actors in the Spanish Conquest of America, by Mr. Arthur Helps, extracted from his larger work, affords us an opportunity of reviewing some of the chief events in Peruvian history, as well as the character of the people whose kingdom the Spaniards overthrew. The recent appearance of another class of works among us, bearing on the undying truths which other ancient nations have worked out for themselves, also stimulate us to a study of the Children of the Sun from a different point of view to that from which they have hitherto been presented to us.

* 1. *Antigüedades Peruanas.* Por MARIANO EDUARDO DE RIVERO y Dr. TSCHUDI. Vienna.

2. *Comentarios Reales de los Incas.* Por el Inca GARCILASO DE LA VEGA. Nueva Edicion. Madrid.

3. *Memoria sobre las Antigüedades Neo-Granadinas.* Por EZEQUIEL URICOECHEA. Berlin.

4. *Diccionario Q'quichua.* Por el R. P. Fr. HONORIO MOSSÉ. Sucre.

5. *Ancient Faiths embodied in Ancient Names.* By THOMAS INMAN, M.D. London.

NEW SERIES.—VOL. VIII., No. 5.

Pre-eminent among these is that of Professor Ewald's "History of Israel to the Death of Moses," which not only throws a loving light on the origin of the People of God who are called by His name, but also on all those other nations, who, though they have received no official recognition of their services, and no "inspired" record chronicles the spirituality of their aim, or the divinity of their national life, yet did design and carry out one of the greatest objects which a nation can set itself to apprehend. The spirit in which Professor Ewald writes has resuscitated the patriarchs, has invested the "divine legation of Moses" with a new glory, and given to the history of Israel such a charm as will redeem it from the uses to which it has been applied.

Another work, of a very different character, has still more recently appeared, and which, some will say, sheds a new light indeed on ancient faiths, but not the light of heaven. At present, we have only one volume of this most laborious work, the conclusion of which will be looked for by many with eagerness and curiosity. Dr. Inman's "Ancient Faiths as em-

bodied in Ancient Names" is the opening of an entirely new vein in a very old mine, the skilful working of which will be a source of great delight to all who study the religions of mankind. It has already suggested some entirely new thoughts on the history of the ancient Peruvians, and will, we are persuaded, throw considerable light on many manners and customs of that people, which up to the present time have been very much misunderstood.

Of the numerous early traditions of the ancient Peruvians, the following, relating to the foundation of their sacred metropolis, has been generally adopted as being the more widely spread among, and believed by, that nation:—"And Manco Khapac cast forth the gold rod out of his hand, and the earth swallowed it up, and there, according to the will of the Holy Ones, he founded the kingdom of Tahanantisuyu." Such is the simple legend of the origin of Keusco, the capital of ancient Peru. They first buried their gold and then built their city; and when afterward they restored the precious metal, it was for sacred uses only. They ornamented their temple with gold inside and out, and the vessels of the altar, as well as the doors, cornices, and capitals, were of pure gold; the Inca's throne was of gold, and whatever gold was found, it was brought to the Inca, not as tribute which the people were obliged to pay, or which the Inca extorted, but solely for pleasure on account of its beauty and splendor, for the ornament and service of the palace as well as the temple, and the houses of the Virgins of the Sun. Gold to them was a token of the divine compassion—a symbol of the sympathy of heaven—and they called it "tears which the sun had shed."

The word Keusco signifies navel; and, following a suggestion of Inman's, as *omphalos* in Greek signifies the navel, pure and simple, but as if we cut the word in two, we find that "om" signifies *maternity*, and "phallos" *paternity*, so by a similar process with the Qquichuan word, we obtain a similar result, and find that Keusco is compounded in like manner. The city itself was also divided, as we shall see, into two parts—one part, the upper, being dedicated to the man, and the lower part to the woman. The ancient Indian myth of Mahadeva

and Sara-iswata (pp. 18—124 of Dr. Inman's work) will be consulted with great interest by all readers of Peruvian antiquities.

Manco Khapac was attended by a lovely woman, his sister-wife, whom they called Mama Occho, and she likewise ministered to the tribes of the Great Mountain Valley, and what Manco Khapac did for the men in teaching and training, she did for women: he taught husbandry, and she spinning and weaving; he gave laws, and she imparted the spirit in which they should be kept; he renewed the fallen form of man by means of skilful labor; she gave grace and comeliness to woman, and was herself—

"All beauty compassed in a female form," insomuch, that when she first appeared to those tribes, they fell down and worshipped her. The part which she played in the founding of our Ancient Kingdom was therefore cognate, but not subordinate, and hence Manco Khapac became not the founder of a mild despotism, or theocracy, or a paternal government, but he was rather we may say the author of a way of life. He was a son of God, and Mama Occho the Eve of a paradise regained.

Some obscurity attaches to the verbal signification of the founder's name, and the Inca historian declares that it is not Qquichuan; but Fr. Honorio declares it to mean pre-eminently the *husbandman*, and secondarily, *man*; whilst the name of Mama Occho is simply, in the most literal sense, *a hen sitting on eggs*.

These legends, with numerous others of equal pith, have survived the jeers and ridicule of more than three centuries, and the language which contains them has been scattered over far-off mountain valleys, like the sand of the sea on a shore strewn with wreck and ruin and broken skulls; yet, as time and the sun sweep the wreck away, the golden sand reappears in its old beauty—

"These sands like Sibyl's leaves" blown about the ruins of Keusco, Titicaca, Quito, and Pachacamac, are every year becoming more precious as the events to which they point become better understood. And, as has been said* of another

* "History of Israel to the Death of Moses," By Heinrich Kwald. Longmans.

ancient people, and their legendary and traditional times, so may it be said of the Peruvians, there is nothing frivolous in such legends, or even immoderate, but there is in them a modesty mingled with dignity and sublimity, and a pastoral beauty associated with Supreme power which distinguished the kingdom in the more stirring times of its instructive history.

"But the spirit of the event—the imperishable and permanent truth contained in it, which sinks deeper into the mind the more frequently it is repeated, and, through countless variations in its reproductions, always beams forth like a bright ray—that spirit gains even greater purity and freedom, like the sun rising out of the mists of the morning. We may, indeed, say that in this respect tradition, dropping or holding loosely the more evanescent parts, but preserving the permanent basis of the story more tenaciously, performs in its sphere the same purification which time works on all earthly things; and the venerable forms of history, so far from being disfigured or defaced by tradition, come forth from its laboratory born again in a purer light. * * * * * A noble people which has already passed through a history pervaded by a certain elevation of purpose, will by this purifying influence of tradition have presented to it the great personages to whom it owes its elevation under even purer and more brilliant aspects, and find them a source of perpetual delight. But in cases where the memory of such lofty examples has, by the lapse of centuries and internal changes, lost much of its original circumstantiality and distinctness, and only survives in a few grand isolated traits, this memory will generally become all the more plastic, assimilating to itself the new great thoughts which now constitute the aspiring people's aim, and, when thus ingeniously modified through their influence, be born again into the beauty of a new life."

Much of the tradition of the Peruvians has been collected in the original works at the head of this article, more remains to be gathered, and we have no doubt but that the story of this ancient people will become a new and perennial source of knowledge—"profitable for doctrine, for reproof, for correction, and instruction in righteousness."

The history of the twelve Incas was written in the splendid public works of their kingdom; in their bridges, which crossed great rivers; their highways, which levelled mighty mountains and uplifted plains, which crossed great swamps and riveted together a realm

stretching north and south more than forty geographical degrees; in their matchless gardens, their aqueducts, their cultured lands of cotton and corn, their vast pastoral plains; in the beauty and splendor of the city of Keusco, and in their transcendent treasures of silver and gold. Thus written, the Spaniards could read that history, and they have even preserved numerous records of it in the unwilling testimony of soldiers and monks, who saw it with their own eyes, but the wonders of which they never failed to attribute to the power of the devil, assisted by the full force of his evil army. What they did not, and could not understand, was the spirit of the nation which they destroyed, its provident laws, its simple life, its happiness, and its view of the world. These we must discover for ourselves from independent sources, if we would know who the Incas were, and what the nature of their rule, what the conquest of Peru really was, and how accomplished.

The story of that conquest is one which has often stirred the hearts of Englishmen, from the times of Hawkins, Drake, and Raleigh, to our own; and the histories of Robertson, Prescott, and Helps, testify to the increased and increasing interest taken in the subject. As long as life continues to be "a tragedy to those who feel," so long will the conquest of Peru continue to be written, as advancing thought and inquiry demand it.

For ourselves, we have no doubt but that at a time not far distant, we shall see an expedition organized to do for the antiquities of the western, what the recent expedition under Professor Agassiz has done for the natural history of the eastern shores of the same continent. Let us hope that the honor of such an enterprise will not be monopolized like the first, by one nation, but be shared by ourselves with our American brethren. The labors of Caldas, Joaquin Acosta, Rivero, Tschudi, Fray Honorio, and others, have produced such fruit as to leave no doubt what the result of such an expedition would be.

As the city of Keusco, or Cuzeo as it is commonly written, was a miniature of the entire Incarial kingdom, we shall endeavor to describe it, and catch such glimpses as we may, in passing, of its

public and social life, as shall cast some light on the religion and civilization which the ancient Peruvians worked out for themselves. The history of Keusco may be written, that of the kingdom of Peru never, for it was made up of nations much older than itself, whose mythologies and customs were abolished long ago, when the worship of the white llama, the puma, the tiger, and the python, gave place to the purer worship and sublimer ritual of the Sun—when the Aymaraes, the Moxos, the Collas, the Chilians, the Araucans, the Chiriguanas, and the Quitanyians became merged in the unity of that one kingdom, which it was the pride and glory of the Incas to consolidate and extend. The peculiar languages of these people remain, and are now the sole reliques of their national existence, and that is no mean testimony to the justice and morality of the Incas' rule. The language of Keusco was taught and learnt throughout the length and breadth of the kingdom, but each nation preserved its own endearing distinction of speech. So that when the Inca, on his accession to the throne, made the tour of his kingdom, as was the royal custom, he could speak with all his people in a language common to all. And when the happy time arrived for those elected to attend the great feasts in the sacred city, they were received not as strangers in a strange land, but as citizens of the same city, equally with those who were born and bred in it.

Keusco is situated in a mountain valley nine miles long, at a height of more than eleven thousand feet above the level of the sea, and some three hundred miles from its shores, in south latitude $13^{\circ} 31'$, and west longitude $73^{\circ} 3'$. It is inclosed by great mountains, one of which, at the head of the valley, the Sacsahuaman, or Falcon's Nest, was the site of the palace of Manco Khapac. At the base of this mountain ran two small streams, between which Hanan, or Upper Keusco, was built, while further down, and on the slope opposite, where these streams became one, was built Hurin, or Lower Keusco, and dedicated to the memory of Mama Ocello. In the reign of Huayna Khapac, the twelfth Inca, a dozen palaces occupied the principal heights, whose corner stones were

laid in molten gold. The streets for the most part ran at right angles, projecting from the great central plaza with four principal streets, which stretched into and were continued by the royal roads, and ran east and west, north and south, two of them for more than two thousand miles each.

The climate of this noble city was part of its charms. It was neither extremely cold nor hot; or if cold prevailed for a day or so, it was only to make the return of warmth still more welcome; and if it became hot, it was yet bearable, for they still knew that the fresh, pure, bracing breath of the mountains would not fail them for long. We need only mention two things to convince us how delicious this climate was. They used no fire in their houses except for culinary purposes, and there was therefore little or no smoke from them, and absolutely none from shops and manufactories, since these and their smelting operations were always carried on at the mines in the mountains where the metal was extracted—and there were no flies, no mosquitos, no sand-flies, no gnats, and vermin could not live. They were a highly economical people, as well as strict observers of the laws of health. This is shown in many ways, but we may mention two which can be fully appreciated by us, namely, their family kitchens or cooking ovens made of clay, and so constructed as to boil or roast a given number of things with the smallest possible consumption of fuel; and their earth closets. By means of these latter, not only was thorough cleanliness preserved, their streams of water kept from pollution, their fields, orchards, and gardens, were likewise maintained in a high state of cultivation. Any citizen of Keusco living in untidiness or filth, was held up to public execration. The apparitors of the temple were also guardians of the streets, and were responsible for their cleanliness and order.

The seasons had their full round and play, but the sun presided over them all in unsullied majesty and unconquerable glory. If it rained, the sun shone, filling the sky with rainbows; if it snowed or hailed, he still withheld not his light and warmth. So that whether it was spring, summer, autumn, or winter, the air was always dry, the sun never absent. No

wonder they worshipped it. No wonder they represented it as having a human form, animated with God-like love. Thus, their temples were adorned not only with symbols of the moon, the planets, and the rainbow, but with the likeness of their sun God in gold. And here we are reminded of another object of heavenly beauty among their art treasures worthy of notice, which has been a puzzle to many learned men, while some grave and silly persons have ascribed its origin, not to the love which the old Peruvians had for objects of natural beauty, but to nothing less than the spite and malignity of the Abaddon. This was a marble cross, of which there were several copies placed in various parts of the city. The original of this cross was older than any church on earth—its antiquity greater than that of any city or nation—and it had hung in the sky centuries of ages before Rome and its wooden crosses were ever heard of. This was the great Southern Cross of the stars, which they called *Catachillay*, the form of which they copied in marble, not for crucifixion—but for pleasure by day—as they had the bright starry original to gaze upon in the sapphire sky of the night. We are told by one* who has contemplated that seeming “rapture of repose” of the southern heavens—

“That about seven in the evening the southern cross, and the others surrounding it, remained, comparatively speaking, alone in their grandeur. Five of them, remarkable for their regularity, are formed chiefly by large stars, four of the first magnitude, including Canopus, being visible. In the centre of them, and upright for some time after sunset, is seen the cross, its lower stars elevated at an angle of 45°. There is a superior clearness in the atmosphere above this old capital of the Incas which seemed to me to bring the cross nearer to the earth than elsewhere.”

It is, however, difficult to escape from the conclusion drawn by Inman as to the symbol of the cross (pp. 150, 412), especially as by his aid we can now understand the triangular or delta shaped doors and entrances to many of their tombs and temples (p. 145). Indeed, the only ground we have for the assertion that the Great Southern Cross was the original of the crosses carved in marble and stone is, that the Peruvians were worshippers of

the heavenly bodies, and many of their ornamental designs were taken from figures formed by combinations of the stars. Dr. Inman’s work will no doubt send the students of Peruvian antiquities back to their studies; but whether they will continue to regard those other objects of curiosity, the upright marble pillars in front of the temple of the sun, as formerly—namely, as means to determine the times of the solstices—or, according to this new light, as gigantic phalli—human emblems of male creative energy, connecting the mind of the worshipper through the high priest of the temple with the Almighty Creator of all things—may be questioned. But Garcilaso might have been guessing the use of these erections when he said they were to denote the precise day of the equinoctial. They were, he says, of the finest marble, in the open area before the temple of the sun, which, when the sun came near the time, the priests daily watched and attended to observe what shadow the pillars cast; and to make it more exact, they fixed on them a gnomon like the pin of a dial, so that so soon as the sun at its rising came to dart a direct shadow by it, and that at midday when in the zenith the pillar made no shade, they then concluded that the sun had entered the equinoctial line. At which time they adorned these pillars with garlands and odoriferous herbs, and placed upon them the seat or chair of the sun, saying that on that day he appeared in his most glittering pomp and glory. Then it was they made their offerings of gold and silver and precious stones to him with all the ceremonies of ostentation and joy. (See Inman, pp. 130, 154, 305.)

The great city was worthy of the sun which smiled upon it, and as the sun is the centre of the universe, sustaining the earth with its light and warmth, so did Cusco make itself the very heart and soul, as it was the centre, of the kingdom. It was well paved, and a stream of water ran down the middle of the principal streets. These were called—“The Ladder,” leading up to the palace of its founder; the *Cantutpata*, or Flower-walk; the Salt-ward, from the salt spring which was there; the *Rimacpampa*, or Parliament plain, where the laws were proclaimed and explained; the *Pumap-*

* Vigne—“Travels,” ii. 92.

chupan, the Lion's Tail; opposite to which was the *Huacupuncu*, or the Holy Gate. From which we gather that if the city was known for its religion and sacred memories, it was no less to be known for its courage and strength. There were numerous other streets, but their names, like the people who once inhabited them, have long since been forgotten, or, what is worse, misunderstood. The city was divided into four quarters—to the east, west, north, and south—corresponding to the four chief divisions of the empire, and which were severally called Antisuyu, east to the Andes; Cuntisuyu, west to the sea; Collasuyu, south to Chili; and Chinchaysuyu, north to Quito; while, as we have said, the name of the kingdom itself was Tahuantisuyu, or the Four Quarters. As the natives of these different sections of the empire came up to the metropolis, they were located in the quarters corresponding to their geographical situation. Each province was divided into departments, not according to their territorial extent, but according to the number of their inhabitants, and each department was represented in its own quarter of the city. The various tribes had each an especial head-dress, which was discernible from all the rest in form or color, or the material of which it was composed, feathers, sashes, and conical woolen caps prevailing.* "The Inca in traversing this city was thus enabled to review every section of his empire, and to recognize the inhabitants of each district at a glance." All these were on the east side of the river which runs through the city. On the western side was the *Cussi-pata*, or Hill of Joy, one of the most charming sites of the Incarial metropolis. It was devoted to the use of the poor—was their favorite resort, and the place where they held their fairs, or met to make their exchanges. The base of the hill was connected with the city by a bridge. The prospect from that terraced Hill of Joy was, as indeed it still is, grand and imposing. In the morning, or at evening, the surrounding hills are clothed in purple, and the air is so pure and trans-

parent that one great snow-capped mountain, called by them the Vilcanuta, or Holy Height, nearly a hundred miles off, may be clearly seen towering above those purple hills in empyrean glory, and seeming to be the guardian spirit of a place and people beloved of God and very dear to man. Below, the country is rich in waving corn fields, and stretching five miles to the south were the great pasturages of the Inca's flocks. A hundred thousand houses, as they would seem to the eye which gazed on that marvellous panorama, reflected back from their fronts of polished stone the light which streamed upon them. The rivulets of water which shone in the same light seemed like silver serpents (their own figure) winding their way harmlessly round the abodes of man; while the number of domestic large-eyed animals roaming about in undisturbed quiet, as well as unclipt gorgeous birds hovering near on terms of marked and loving intimacy, testified to the love which Manco Khapac had inspired in the hearts of his people, and the earnestness, simplicity, and beauty in which that love was offered back to God.

In strict relation to this, and in proof and illustration of this, and none other, being the mind which was in that nation, we may here mention two or three of their social customs, sprung from

"A deep story of a deeper love."

Among the chief ladies of the court the memory of Mama Ocello was kept alive by imitating her example. All the princesses wrought in needlework, not only tapestries and hangings in rainbow hues, but in clothing for the poor, as well as in weaving altar-cloths and robes for the priests. "Lovers of the poor" was one of the distinguishing names of the Incas; but they showed their love in taking upon them the form and doing the work of servants. In the Incas, this was the spontaneous act of a nature fashioned thereto by a love which exerted itself without effort and without hope of reward. Again, they were eminently a social people; they built up their language not merely by a tender-loving observance of the works of the Creator, but by friendly intercourse with other nations and people, as well also by an active enjoyment of the social affections

* It is worthy of remark that the head-dress of the Incas was a pair of wings; symbolical of swiftness, and incubation, perfect freedom, and dutious care.

in their own most charming city. They were greatly given to hospitality, kindness, and courtesy towards each other. Not only did they labor together in great public works, they lived together in like harmony ; their unbought industry and their wise frugality showing them to be a great and a free people. It was a custom among them, in visiting each others' houses, to carry some useful work with them. The women and young girls always took their spinning, the men and youths their fibre-twisting, slings to sort, or other tackle to shape and mend. But if any not of royal blood visited a princess, they carried no work with them, but asked for work to be given to them, and the princess would prove herself a real descendant of the Mama by giving them the same kind of work to do which she or her family were engaged in. This is a sort of co-operation which we have not heard of in these latter days. There were among them neither professed tailors, shoemakers, nor dressmakers, for it was among their virtues that each, from the Inca down to the meanest subject, should learn to make his clothes for himself, and no prince ever received their peculiar order of knighthood until he had learnt to make his own sandals. The aristocracy, the rulers, priests, and *amautas* had each his own tailor and shoemaker, but in the spirit of a truly paternal government, none else were allowed to have their clothing made for them. Again, they never patched their clothes. One of the first things which brought the Spaniards into contempt in their eyes was the patched condition of the clothing in which they first appeared. All their clothing was shaped and made in the loom ; and if by any accident it was rent or torn, it was again put into the loom and mended, and that so cunningly that it could not be told where the rent had been. The Peruvians had grown into the belief that what was worth their doing was worthy of being done well. They had grown a thorough people, and it was this thoroughness in their work which made them what they were—quiet, patient, loving, and worshippers of nature. It was not only the source of their knowledge, it was the foundation of their religion and the fountain of their laws.

These simple customs—which exist to this day among the Qquichua-speaking natives of the far interior of Bolivia and Peru—taken in connection with their religious beliefs and ceremonies, and the larger growth of their national life, confirm us in the conviction that they held their own legends as inspired truths which taught them of the heavenly origin of their founder, and the divinity of his words and work. But further, in the ancient city of Keusco there were no fastenings to be found on the doors of temple, palace, or private dwelling, for there were no thieves, and the figure of the coming of the Son of God, however appropriate it might have been for Jerusalem, could not have been understood in Keusco, and would require revision to suit a state of things not intended, perhaps, to be superseded. No thieves—and it is reiterated that women and young girls could walk alone in any unreflected paths without fear of insult or mortal harm from man. Only by “the tide of a joyful, bounding emotion” can the masses of mankind be carried over impediments such as these. They loved, with a rapturous, indescribable love, their Sun Kings, and venerated their laws ; and it was this “joyful, bounding emotion” kindled in their natures, which, raising them heavenward, carried them over the stumbling blocks which fill the narrow way that leads to it. If we were to say that all punishments were administered at once, and that no law case of whatever nature, when it had once been brought before a judge, could ever be delayed, adjourned, or put off for a period longer than five days, we might lay ourselves open to the charge of writing a satire on the civilization of “our great cities,” lit up with the superior light of the Reformation, and blessed by a deity worshipped under the name of the Sun of Righteousness.

Manco Khapac built no temples to the unseen God, for he taught that the Creator of the universe, who was an animating, sustaining spirit, could only be worshipped in the unseen temple of each worshipper's heart ; but to the Sun, as the expression of the glory and power of the Creating Spirit, they ought to build temples. In what consisted that glory and power he taught them ; and they believed him. He was held to be

a child of the Sun and an incarnation of the deity they adored. What the name of the unseen Creator and Governor of all things was, by which He was made known to the Peruvians, we have never been told, nor is it certain that Manco Khapac or his immediate successors (successors in the strictest sense he had none) gave them any abstract name by which the Sovereign deity was named among them. Pachacamac,* a name by which the Creator was subsequently known, was introduced at a later period, probably during the reign of the fifth or sixth Inca, when we hear of a strange scepticism, which never afterwards died out, emanating from the palace, respecting the divinity of the sun, and which greatly damaged that heliacal worship, which, in a corrupted form, and owing to priests, sages, and soothsayers, had grown up among them. To Inca Roca is ascribed the foundation of certain colleges and schools, designed for the youth of the aristocracy, and perhaps also with a view to unify the national faith. He also promulgated many famous sumptuary laws, which changed, without improving, the current of the indigenous civilization. He is reported to have repeatedly said :

"That considering the grandeur of the heavens, their beauty and constant splendor, the Creator of the world, judging from the palace he occupied, must be a Being superior to the heavens, and that if he—the Inca—were inclined to worship anything on this side those palace walls, he would certainly adore a man of wisdom and discretion; for that he is superior to all earthly things. But he who is born a child, is here to-day, and gone to-morrow; and who cannot deliver himself from death ought not to be worshipped."

From that time there was a split in the kingdom; there was a Sun party and a sceptical party; but the Sun party, which was the party of the court and aristocracy, prevailed, and the Incas from that period to the time of the greatest sceptic of them all, Huayna Khapac, might have changed their names to Popes, and infallible vice-regents of a power they could only represent by usurping it. And yet the prince who could say those brave words in the face of the court which maintained the imposture of its own

heavenly origin, and divine immunity from error, was the prince who forbade all learning to the common people, and who condemned men to a given trade; so that once a gardener, goldsmith, or mason, these trades must follow them through all generations. This was governing with a vengeance; and the vengeance neither slumbered nor slept. But although it is certain that liberal ideas spread through the kingdom on the subject of the divinity of the Sun—and it is equally certain that he was no longer universally reverenced as equal to the Father, as touching his godhead, or superior to the Father, as touching his manhood—yet the splendor of their feasts devoted to the god of day never abated, and before the close of the reign of the twelfth Inca there was no tribe or nation or people throughout the kingdom, without its temple to the sun, many of which were of vast magnificence; and even the one great temple erected by a peculiar people to Pachacamac (the invisible God) in the valley which still bears his name, erected by a nation at one time alien to the Inca's rule, became ultimately changed into a temple of the sun; or rather, more strictly, a compromise was effected, and an image of the sun was placed over the shrine dedicated to the unseen God, and there was gladness in the hearts of the "faithful"—which reminds us of the gladness once felt by another faithful people when they saw the cross one day lifted to a level with the crescent on the banks of the Bosphorus.

The feast of summer, pre-eminently the feast of the sun, was celebrated in the royal city with wonderful pomp and magnificence. It was on this great day, called the Feast of Raymi, which is also December, that the chiefs and governors and princes of the kingdom assembled together in Cusco for worship. And if any of these, by reason of extreme old age, infirmity, or sickness, or for being on service at a distance, could not attend to keep that feast, then they sent their sons, or some other near relative, to represent them. All came in splendid robes, bearing their arms, each one in his national costume, rivaling each other in the gorgeousness of their symbols and the bravery of their ornaments. The multitude was very

* "Pacha, the world or universe, and *camac*, the present participle of the verb *cáma*, to animate." —*Garcilaso*.

great, of people as well as nobles—so great that there was no room in the houses to receive them all, and they encamped in the open spaces of the city, the great squares, the streets, on the hill sides, and in the meadows, under their own tents. The feast was preceded by three days of rigorous fasting, during which time no fire was allowed to be kindled in any house of the city, and their only food consisted of a little maize and an herb called *chucan*. Husbands and wives slept apart. The Inca, with the whole of his court, presided at this feast. He set out early in the morning from his palace, barefoot, and walked to the great square, where the multitude assembled to salute the rising sun. Each noble, chief, or governor, was attended by a servant carrying a plume of feathers, called an *achihua*, or parasol, so that the great plaza, and the streets leading to it, seemed as if covered with one vast many-colored feathery awning. As the sun rose, there rose one grand simultaneous shout of jubilee; drums beat, pipes played, and the voices of a hundred thousand men sent up one burst of praise. Summer had begun. The blessed sun had returned with his blessings. The mighty multitude lifted up their arms to embrace the heavenly rays which descended upon them, and kissed the air as if it were the raiment of God. Two golden vessels filled with consecrated wine were then offered to the deity by the Inca. The one in his right hand was poured through a golden tube which passed from the plaza on to the altar of the temple, and with the one in his left hand he drank the health of his family, and then poured a little into the small gold cups brought for the purpose by the nobles, chiefs, and governors, who drank with the Inca. Then the Inca, his family, and the nobles proceeded to the temple, all barefooted, and there offered those small gold cups thus consecrated on the inner altar. Only these persons were allowed to enter the sacred edifice on this occasion; the people, also barefooted, remained without and worshipped. Having made their offerings, all returned in the same order to assist the high priest in the sacrifices, which were offered on an altar richly adorned and placed in the centre of the great square.

The first was of a llama lamb, black, without spot or blemish, in the entrails of which the priests searched for some sign by which to read the future. After this came the general sacrifice, which consisted of numerous llamas and alpacas. The entrails and heart were burnt to ashes; the flesh was distributed among the poor, and the wool made up into clothing for the army. After this came the drink-offerings. The Inca, seated on a throne of gold, drank to his family and then to certain principal chiefs, together with the warriors who had distinguished themselves in battle. Then the members of the royal family drank to each other. The chiefs followed their example. By and by, so much pledging produced its joyous effect, and greatly increased the general rejoicing. This was followed by dances, fancy balls, charades, plays, and all kinds of music and games, which lasted eight days. Thus they kept the feast of summer—the time, in their own language, when the earth is clothed with its principal beauty, when the flowers appear, and the trees bear their fruit, and the birds sing, and all nature dances for joy, made happy in the sacred radiance of the sun.

The sun received other offerings, as painted stones, gold in the form of bars or thin leaves, silver, and copper, and copper crystals, emeralds, opals, jasper, rubies, and amethysts; maize, prepared in various ways, coca, potatoes, fruits, spices, and perfumes, and beautiful shells of the sea. One could wish that this list might be closed with that last offering, but it is not to be concealed that, besides llamas and alpacas, they occasionally sacrificed human beings. This was done, however, only at very solemn times, as for example when the Inca fell sick. One of their number was then vicariously offered, when they implored their god to take the life so given for that of their king.

Mr. Helps* deprecates this charge of human sacrifices being brought against the Incas, and suggests † that the original worship of the Peruvians, or at least their worship at its best, was devoid of human sacrifices, although in places distant from the centres of civilization, Cusco and Pachacamac, and in times

* "Spanish Conquest," iii. 499.—Note.

† Vol. iii. 556.

long subsequent to those of the first Incas, when their rule may have become less beneficent and more despotic, human sacrifices were made on certain occasions connected with family events in the great families, and perhaps, periodically, in the remote districts; and Mr. Helps asks us to pause and ponder much before we take away the character of a great people on such an important point as that of human sacrifices. Awful as were the consequences to them, as they must be to all from the possession of such a creed, yet they believed it—not as a figment of theology, but as an instinct of their religious conscience. Still, human sacrifices play an equally mysterious part in the history of the ancient "children of God," and may, for aught we know, have had their origin in the same way among the ancient Peruvians. We read in the Book of Leviticus—

"Moreover, every devoted thing which a man shall devote unto the Lord out of all that he hath—out of man, and out of beast, and out of the field of his possession—shall not be sold, and shall not be redeemed. Every devoted thing is *holy of holies* unto the Lord. Every devoted thing which shall be devoted of men shall not be redeemed; it shall surely be put to death.*"

The Peruvians not only devoted the firstlings of their flocks, but also their children on certain special occasions to God. As many as thirteen of the old historians, all of repute, would convince us that Garcilaso was simply mistaken in denying the custom; but at the same time they insist upon it that those sacrifices were offered, not in the same brutal and gross manner, nor anything approaching to the same extent, as prevailed among the Mexicans and others. Nor must we class these sacrifices with the dreadful, bloody rites of savage tribes, in ancient story, or in the clumsy statements of travellers of our own day. All that we have to say is that in no nation do we read of human life being held in greater sanctity than among the ancient Peruvians, and it was because a human life was the most precious form of life that they offered it to their deity. It was the best they had to offer; and that it was not from cruelty nor a delight in blood and the agonies of torture, but

because they considered they had sinned, and could thus propitiate their God, or hope that he might be induced to accept the life of one for the lives of others; and we must not forget that the Inca did not spare his own son if the occasion seemed to demand it.

Connected with their religious ceremonies was a belief in the immortality of the soul, the resurrection of the body, and a scale of future punishments and rewards, and we must find room to mention two or three remarkable rites and ceremonies which will puzzle the Pan-Anglican Synod to explain, or explain away. One of these customs was a kind of infant baptism. The Peruvians gave their children a name which was to distinguish them from all others; so that the subjects of the Incas were not, as we have been told, like so many bricks in a pyramid, but individual entities of a great kingdom. In some districts the child was baptized immediately after its birth, and in others not till it was weaned, which was at the end of two years or so. The father of the family gave the name to his child, and all the relations were summoned to the ceremony, one of them being elected to be, as we should call him, the god-father. The god-father having received a sharp stone, cut off a portion of the child's hair and pronounced its name. All the other relatives did the same, till the hair with which the child was born was entirely cut away. The god-father then made the child a present, and the rest also brought presents to the newly-born. The child was then washed in pure water, and afterwards this water was put into a hole which was dug in the ground by a priest, and certain prayers were said, that the child might thenceforth be preserved from all evil influences and all secret enemies of the unseen world. How far this had any connection with "a mystical washing away of sin" we will leave any of our readers interested in the subject to determine for themselves.

The next remarkable ceremony we have to notice was the second baptism, or initiation into the kingdom as subjects able to fulfil its obligations and share in its larger joys. At the age of fourteen, when the boy first put on the shirt, and the catamenia first appears in

* And Jephthah, one of the judges of Israel, sacrificed his own daughter to the Lord.

the girl, the candidates received another name, a name having some special meaning, and bearing special allusion to family history or national events. This was a time of great public rejoicing, and the chief of the tribe or head of the department, presided at the feast, and bestowed this new and second name on the young people. It was the occasion of a strange, suggestive ceremony. The finger-nails were pared, and the hair of the neophytes cut off in sight of all the people, and offered as a sacrifice to God. Was this meant to signify that their talents and their beauty were consecrated to heaven? that their hands, with all their cunning and power, were to serve God, and the graces of their persons were to be preserved to his honor and glory? Or did this cutting off of hair and nail point to the duties of personal mortification, and that their bodies, with their desires, their wills and inclinations, were to be kept in subjection to the higher power?

And here we are reminded of the manner in which the manhood of Huascar, the last of the Incas, was celebrated by his father, Huayna Khapac, in our ancient city. The baptismal name which the young prince received was that of Inti Cusi Huallpa, or the Prince of the Joyous Sun. Huascar, however, signifies a bond, a rope, or chain, and the chain-dance on this occasion was danced by the principal curacas, governors, and viceroys of the kingdom, some three or four hundred in number. The dance began by all forming in a straight line, and then slowly at first, taking one step backward and two steps forward, each (on ordinary celebrations) being provided with handfuls of beautiful blossoms, the dancers reached the opposite side of the plaza, where the feast was held, making streams of flowers in the air, sometimes with one hand, sometimes with both, over their heads, singing and chanting at the same time. As viewed from the front, this straight line of gracefully-moving figures had the appearance of a heaving sea whose waves were flowers, but seen from either end, in profile, the effect was that of a bower of bright and dancing colors. But on this occasion the effect was to be different, as there was a special object to be symbolized. Instead of a mimic surging sea of flowers tossed in

the air, a golden chain was provided by Huayna Khapac, which united those dancers together, as the Incas would have the whole kingdom united in the bonds of love and the golden virtues. This chain of pure gold, whose links were as large as bracelets, and whose length was more than seven hundred feet, is one of the many golden treasures still concealed in Peru, which no Spanish thief, by means of any of his Catholic apostolic tortures, has ever been able to discover; but whether it is in safe keeping, or at the bottom of some lake, is not generally known.

We are not copying from buried documents in the archives of Simancas, much less from the pages of the monks and clerical soldiery of the sixteenth and seventeenth centuries, but we are quoting from the later works of travellers, who investigated these things in the country where they occurred, besides facts which we produce from independent sources. We give them as the best criticism we have to offer on our previous knowledge of the kingdom of ancient Peru.

"And still as we proceed,
The mass swells more and more,
Of volumes yet to read—
Of secrets yet to explore."

Empedocles on Etna.

The third of those singular rites to which we have alluded gives us an insight into the profession of "personal religion" as practised in Cusco. We have mentioned the fasts which the Peruvians observed previous to holding their great festivals. These fasts were extremely rigorous, and lasted sometimes as long as seven or eight days, during which time the only fire allowed on the earth was the sacred flame on the altar of the temple. This was a time of general confession. Each penitent at the beginning of his confession received from the priest a few of the ashes of the burnt offerings, which he blew reverently into the air. Afterwards he received a small white stone, and went to wash in a stream hard-by, set apart or made sacred for the purpose. Then returning, he called upon the heavens and the earth, the birds of the air, and the beasts of the field, to testify against him if he did not make a true confession. This done, it was customary to prove the confession by the penitent throwing

a handful of maize into a basin. If the number of grains on being counted was even, the confession was good; if odd, then it was bad, and had to be made over again—a silly, superstitious custom, showing the mark of a meddlesome hierarchy, and reminding us of the custom among some Protestant Christians of "pricking the Bible" to find out what they profanely called the "mind of God concerning them." The chastisements imposed upon transgressors were not light, and consisted of separation from the society of women for a time, abstinence from salt and pepper, all pleasant food, and *azua* wine. Sometimes they lashed themselves with scourges, and sometimes they stripped themselves naked of the clothes in which they had transgressed, burnt them, and then procured new ones: a very singular penance, and a peculiar mode of showing that they had put off the old man with his deeds.

(To be concluded.)

Eclectic Review.

CURIOUS MYTHS, MEDIEVAL AND INDIAN.*

MR. BARING-GOULD has certainly lighted upon a fruitful soil. We believe, in our mention of the first series, we referred to the many interesting remaining myths upon which he might expend his research. The same remark holds still; there is abundance of store behind. Mr. Gould seems to have an omnivorous power among the old documents, books, and legends of the middle ages; he has a very interesting way of dovetailing together various but corresponding legends; and this greatly constitutes the value of his essays. No single account stands alone; each myth is shone upon by a number of corresponding side lights, so that, while the attention is fixed upon the chief object, the reader obtains a store of information illustrating what we have called, in a

paper we published some time since, "The Unity of the Popular Tale." He is, however, a singular gentleman, this Mr. Baring-Gould. Perhaps it demands a certain measure of childishness thoroughly to appreciate these old stories, shall we say a kind of simple faith which paralyzes the judgment? Certainly the learned author seems to possess the requisite measure of childishness to fit him for the task. Whatever might have been our view of the mythological system of Romanism, we think we should scarcely have said, "it would be a study of no ordinary interest to trace modern popular Protestantism back to the mythologic systems of which it is the resultant." He tells us that he is quite "satisfied that we make a mistake in considering dissent in England, especially Cornwall, Wales, and Yorkshire, as a form of Christianity." In fact, to dissent he describes as a kind of Druidism passing itself off as spiritual Christianity. We have been quite charmed by the delicious insight of some of Mr. Gould's speculations. The belief in angels he speaks of as an heathen item of popular Protestant mythology, and he instances the words—

Hark! they whisper; angels say,
Sister spirit, come away,

which is rather an unfortunate illustration of his argument, as the piece was really written by a Roman Catholic; "the hymn," he says, "'I want to be an angel,' so popular in dissenting schools, is founded on the venerable Arian myth, and therefore of exceeding interest, but Christian it is not." In fact, Mr. Gould is evidently under the impression that all of us unfortunate dissenters are, at best, a set of poor, benighted pagans, living, he does us the honor to think, as best we can up to our lights, but all our creed unquestionably of a heathen stock; so he has rummaged about among curious worlds of old books utterly oblivious of the faiths and feelings of the men and women by the side of him. As to Mr. Gould himself, we are not quite certain what to make of him; and if it pleases him to prove us pagans, we think we could at any rate, with an equal amount of justice, from his own words, make him out pantheist, atheist, heretic of all sorts and shades of contradictory belief. We

* 1. *Curious Myths of the Middle Ages.* By S. Baring-Gould, M.A. Second Series. Rivington.

2. *The Silver Store, collected from Medieval, Christian, and Jewish Mines.* By S. Baring-Gould, M.A. Longmans, Green & Co.

3. *Old Deccan Days; or, Hindoo Fairy Legends, Current in Southern India, collected from oral tradition.* By M. Frère. With an Introduction and Notes, by Sir Bartle Frère, the illustrations by C. F. Frère. John Murray.

shall neither be so wicked nor so foolish. We simply wonder that so learned a man should be such a goose; a man, we suspect, with an infinite capacity for swallowing all sorts of stories and superstitions, and that makes him a very fresh and delightful creature to us, as he reads over his extracts from his rare old books; a man apparently with no more idea of spirituality in life or service than an old Hindoo, and with a very unpleasant narrowness of sympathy; and this makes it very disagreeable to us. It does not, however, very frequently appear, and assuredly shall not warp our estimate of him as a very entertaining and instructive writer. The myths discussed in this volume are, if possible, we think, even more interesting than those of the last. The Sangreil is not so lengthy as the subject deserves; and a poor dissenting minister, who died some years since, one Alfred Vaughan, of whom, as a dissenter, of course Mr. Gould would not be likely to have heard, or hearing, would only have treated with contempt, furnished a much more complete and interesting history, much more worthy of the rich magnificence of the gorgeous myth. Indeed, we are surprised that this which we have been accustomed to regard as the most fascinating, mystical and imposing myth of the early ages of the Church, should have received from our author so slight a treatment. "The Knights of the Swan and the Swan Maidens," "The Fortunate Isles," "Melusina and the Mermaids," "Bishop Hatto," and "The Pied Piper of Hamelin," in which, by the bye, as he has quoted so very lengthily from Robert Browning's poem, we think he might have had the grace and courtesy to have acknowledged the authorship; but Robert Browning is one of those horrid pagan dissenters, and such fellows do not deserve respectful treatment; such we have no doubt would be the reasoning of our Catholic-minded friend. Then we have "Schamir," and the "Legend of St. George and the Dragon," the "Legend of Theophilus," the "Eleven Thousand Virgins and St. Ursula," and the "Legend of the Cross," the chief facts of which we have already set before our readers some time since, in the paper on the "Sign of the Cross," and which,

by the bye, like most of the papers in the volume, gives to paganism the origin of the sign, since it seems clear that as a mystical mark and token blending eternity in correspondence with time, it was used in periods long anterior to the crucifixion of Christ, and its introduction as the emblem of Christianity. We quite believe with Mr. Gould, that, as a symbol of life and generation, it is as widely spread over the world as the belief in the ark of Noah; it meets us in the earliest ages, it is found in the most ancient of rites or ruins, in Egypt, among the Etruscans, long before the Etruscans, in the depths of the forests of central America. In the "Hammer of Thorr" in the "Stone Cruciform Hammers of Denmark," he says:

It is more than a coincidence that Osiris by the cross should give life eternal to the spirits of the just; that with the cross Thorr should smite the head of the great serpent, and bring to life those who were slain; that beneath the cross the Muysea mothers should lay their babes, trusting by that sign to secure them from the power of evil spirits; that with that symbol to protect them, the ancient people of Northern Italy should lay them down in the dust.

The legend of the cross is one of the wildest of mediæval fancies, and the very legend itself was founded, though unconsciously, on the truth that the cross was a sacred sign long before Christ died upon it. Mr. Gould gives to us at length this marvellous, wild, and mystical legend, from the pages of Gottfried von Vitervo:

When our first father was banished Paradise, he lived in penitence, striving to recompense for the past by prayer and toil. When he reached a great age, and felt death approach, he summoned Seth to his side, and said, "Go, my son, to the terrestrial Paradise, and ask the archangel who keeps the gate to give me a balsam which will save me from death. You will easily find the way, because my footprints scorched the soil as I left Paradise. Follow my blackened traces, and they will conduct you to the gate whence I was expelled."

Seth hastened to Paradise. The way was barren, vegetation was scanty, and of sombre colors; over all lay the black prints of his father's and mother's feet. Presently the walls surrounding Paradise appeared. Around them nature revived; the earth was covered with verdure and dappled with flowers. The air vibrated with exquisite music. Seth was dazzled with the beauty which surrounded

him, and he walked on, forgetful of his mission. Suddenly there flashed before him a wavering line of fire, upright, like a serpent of light continuously quivering. It was the flaming sword in the hand of the cherub who guarded the gate. As Seth drew nigh, he saw that the angel's wings were expanded so as to block the door. He prostrated himself before the cherub, unable to utter a word. But the celestial being read in his soul, better than a mortal can read a book, the words which were there impressed, and he said, "The time of pardon is not yet come. Four thousand years must roll away ere the Redeemer shall open the gate to Adam, closed by his disobedience. But as a token of future pardon, the wood whereon redemption shall be won shall grow from the tomb of thy father. Behold what he lost by his transgression!"

At these words the angel swung open the great portal of gold and fire, and Seth looked in.

He beheld a fountain, clear as crystal, sparkling like silver dust, playing in the midst of the garden, and gushing forth in four living streams. Before this mystic fountain grew a mighty tree, with a trunk of vast bulk, and thickly branched, but destitute of bark and foliage. Around the bole was wreathed a frightful serpent or caterpillar, which had scorched the bark and devoured the leaves. Beneath the tree was a precipice. Seth beheld the roots of the tree in hell. There Cain was endeavouring to grasp the roots, and clamber up them into Paradise; but they laced themselves around the body and limbs of the fratricide, as the threads of a spider's web entangle a fly, and the fibres of the tree penetrated the body of Cain as though they were endued with life.

Horror-struck at this appalling spectacle, Seth raised his eyes to the sunmit of the tree. Now all was changed. The tree had grown till its branches reached heaven. The boughs were covered with leaves, flowers, and fruit. But the fairest fruit was a little babe, a living sun, who seemed to be listening to the songs of seven white doves who circled round his head. A woman, more lovely than the moon, bore the child in her arms.

Then the cherub shut the door, and said, "I give thee now three seeds taken from that tree. When Adam is dead, place these three seeds in thy father's mouth, and bury him."

So Seth took the seeds, and returned to his father. Adam was glad to hear what his son told him, and he praised God. On the third day after the return of Seth he died. Then his son buried him in the skins of beasts which God had given him for a covering, and his sepulchre was on Golgotha. In course of time three trees grew from the seeds brought from Paradise: one was a cedar, another a cypress, and the third a pine. They grew with prodigious force, thrusting their boughs to

right and left. It was with one of these boughs that Moses performed his miracles in Egypt, brought water out of the rock, and healed those whom the serpents slew in the desert.

After a while the three trees touched one another, then began to incorporate and confound their several natures in a single trunk. It was beneath this tree that David sat when he bewailed his sins.

In the time of Solomon this was the noblest of the trees of Lebanon; it surpassed all in the forests of King Hiram, as a monarch surpasses those who crouch at his feet. Now, when the son of David erected his palace, he cut down this tree to convert it into the main pillar supporting his roof. But all in vain. The column refused to answer the purpose: it was at one time too long, at another too short. Surprised at this resistance, Solomon lowered the walls of his palace, to suit the beam, but at once it shot up and pierced the roof, like an arrow driven through a piece of canvas, or a bird recovering its liberty. Solomon, enraged, cast the tree over Cedron, that all might trample on it as they crossed the brook.

There the Queen of Sheba found it, and she, recognizing its virtue, had it raised. Solomon then buried it. Some while after, the king dug the pool of Bethesda on the spot. This pond at once acquired miraculous properties, and healed the sick who flocked to it. The water owed its virtues to the beam which lay beneath it.

When the time of the crucifixion of Christ drew nigh, this wood rose to the surface, and was brought out of the water. The executioners, when seeking a suitable beam to serve for the cross, found it, and of it made the instrument of the death of the Saviour. After the crucifixion it was buried on Calvary, but it was found by the Empress Helena, mother of Constantine the Great, deep in the ground with two others, May 3, 328; Christ's was distinguished from those of the thieves by a sick woman being cured by touching it. It was carried away by Chosroes, king of Persia, on the plundering of Jerusalem; but was recovered by Heraclius, who defeated him in battle, Sept. 14, 615; a day that has ever since been commemorated as the Feast of the Exaltation of the Cross.

Mr. Gould's volume is a most curious and instructive essay on comparative mythology, but he almost compels us to feel that he does not see the meaning of his own conclusions. He finds dissenters believing in angels. Ah, he says, you are pagans; that is heathenism. What then is this belief in the sign of the Cross which we are afraid obtains much more universally among members

of Roman and Anglican churches than among dissenters? Is not this Paganism too, since it seems to be a sign so widely diffused among pagan peoples? Suppose it is so in both instances, why we have here, not a ground for scoffing and sneering, but one of the most interesting results of comparative mythology; we should say, instances of the singular correspondence, in all ages, of human instincts. We are not so much disposed to believe that resembling myths are therefore, in all instances, as Mr. Gould seems disposed to teach, derived by tradition from each other; they seem rather to illustrate how, in widely remote latitudes, the hopes and fears of men express themselves in very much the same way. We made this remark, we believe, before, with reference to his treatment of William Tell. The story of human nature produces in many instances a brotherly resemblance and difference. Some traditions have no doubt a series of long succeeding generations—we mark their variations, but seem able to trace them to some one common centre; on the other hand, men who have never known a tradition find themselves in similar circumstances to those who originally produced it; but Mr. Gould seems unable to apprehend that sequence and harmony in high spiritual human instincts. Readers might sometimes suppose him a mere sceptic in the spiritual nature of man; he details resemblance in legends and stories, and gathers them till they become like accretions round his central stem; he seems to have no insight into that spiritual nature which produces these things; thus they become a collection of folk-lore without that grasp of philosophic thought which would reduce them to higher order and harmony in the nature of man. If it were not so, Mr. Gould would not consign certain faiths—if he pleases, superstitions—with us to pagan ancestry, while from the same pagan ancestry he arbitrarily permits others to hold a dominant and perhaps healthful influence over the mind; in fact, the whole world of mythology is a homage to the spiritual nature of man. A sceptic like Mr. Gould can make nothing of it; it is simply curious; he does not see the meaning of his own coincidents. He does very truly say, and so far seems to

confirm our own impression, in spite of his contradictory passages, "that the restless mind of man, ever seeking a reason to account for the marvels presented to his senses, adopts one theory after another, and the rejected explanations encumber the memory of nations as myths, the significance of which has been forgotten." One of the most curious of these instances is "Schamir," the hard, cutting pebble, or divine stone, in relation to which our writer finds a rich variety of forms. Schamir was the stone of wisdom, by which Solomon wrought the stones of his temple without iron, and in many curious forms we find its prevalence in literary and in popular superstitions; a charm in fact, a symbol of power sometimes possessed by a mystical worm, a raven, or at the root of some hidden tree. Schamir had the power of giving life, sometimes it seems to reappear as a flower, but with many of the properties of a stone.

Germany teems with stories of the marvellous properties of the Luckflower.

A man chances to pluck a beautiful flower, which in most instances is blue, and this he puts in his breast, or in his hat. Passing along a mountain-side, he sees the rocks gape before him, and, entering, he sees a beautiful lady, who bids him help himself freely to the gold which is scattered on all sides in profusion. He crams the glittering nuggets into his pockets, and is about to leave, when she calls after him, "Forget not the best!" Thinking that she means him to take more, he feels his crammed pockets, and finding that he has nothing to reproach himself with in that respect, he seeks the light of day entirely forgetting the precious blue flower which had opened to him the rocks, and which has dropped on the ground.

As he hurries through the doorway, the rocks close upon him with a thunder-crash, and cut off his heel. The mountain side is thenceforth closed to him forever.

Once upon a time a shepherd was driving his flock over the Ilzenstein, when, wearied with his tramp, he leaned upon his staff. Instantly the mountain opened, for in that staff was the "Springwort." Within he saw the Princess Ilse, who bade him fill his pockets with gold. The shepherd obeyed, and was going away, when the princess exclaimed, "Forget not the best!" alluding to his staff, which lay against the wall. But he misunderstanding her, took more gold, and the mountain clashing together, severed him in twain. In some versions of the story, it is the pale blue flower—

The blue flower, which, Brahmins say,
Blooms nowhere but in Paradise—

(*Lalla Rookh*)

which exclaims in feeble, piteous tone, "Forget-me-not!" but its little cry is unheeded. Thus originated the name of the beautiful little flower. When this story was forgotten, a romantic fable was invented to account for the peculiar appellation.

In the story of Ali Baba and the Forty Thieves, it is a word, "sesame," which makes the rocks part, and gives admission to the treasures within; and it is oblivion of the magic word which brings destruction upon the luckless wretch within. But sesame is the name of a well-known eastern plant, *sesamum orientale*; so that probably in the original form of the Persian tale absorbed into the "Arabian Nights," a flower was employed to give admission to the mountain. But classic antiquity has also its rock-breaking plant, the *saxifraga*, whose tender rootlets penetrate and dissolve the hardest stones with a force for which the ancients were unable to account.

To this generation of Legends, Mr. Gould assigns the "Hand of Glory," and it is certainly curious to find the word *smiris*, as used by Isaiah, the name of a plant, but which Mr. Gould regards as a stone-breaking substance, rendered in Latin *saxifraga*, or thorn, or as in the north of Europe, *springwort*, in alliance with the "Hand of Glory," and this Hand of Glory appearing in traditions from the East, and in superstitions which have not long faded from, if they are not prevalent in, some departments of the popular mind of our own day. Mr. Gould put several things, far enough apart, together, in his account of the "Hand of Glory."

This is the hand of a man who has been hung, and it is prepared in the following manner: wrap the hand in a piece of winding sheet, drawing it tight, so as to squeeze out the little blood which may remain; then place it in an earthenware vessel with salt-petre, salt, and long pepper, all carefully and thoroughly powdered. Let it remain a fortnight in this pickle, till it is well dried; then expose it to the sun in the dog-days, till it is completely parched, or, if the sun be not powerful enough, dry it in an oven heated with vervain and fern. Next make a candle with the fat of a hung man, virgin wax, and Lapland sesame. Observe the use of this herb: the hand of glory is used to hold this candle when it is lighted. Douster Swivel, in the "Antiquary," adds, "You do make a candle, and put it into the hand of glory at the proper hour and minute, with the proper cere-

monist; and he who seeketh for treasures shall find none at all!" Southey places it in the hands of the enchanter Mohareb, when he would lull to sleep Yohak, the giant guardian of the caves of Babylon. He—

From his wallet drew a human hand,
Shrivell'd, and dry, and black;

And fitting, as he spake,
A taper in his hold,

Pursued: "A murderer on the stake had died;
I drove the vulture from his limbs, and lopt
The hand that did the murder, and drew up
The tendon strings to close its grasp;

And in the sun and wind

Parched it, nine weeks exposed.

The taper . . . But not here the place to impart,
Nor hast thou undergone the rites
That fit thee to partake the mystery.
Look! it burns clear, but with the air around,
Its dead ingredients mingle deathliness."

Several stories of this terrible hand are related in Henderson's "Folklore of the Northern Counties of England." I will only quote one, which was told me by a laboring man in the West Riding of Yorkshire, and which is the same story as that given by Martin Anthony Delrio in his "Disquisitiones Magicae" in 1593, and which is printed in the Appendix to that book of M. Henderson.

One dark night, after the house had been closed, there came a tap at the door of a lone inn, in the midst of a barren moor.

The door was opened, and there stood without, shivering and shaking, a poor beggar, his rags soaked with rain, and his hands white with cold. He asked piteously for a lodging, and it was cheerfully granted him; though there was not a spare bed in the house, he might lie along on the mat before the kitchen fire, and welcome.

All in the house went to bed except the servant lassie, who from the kitchen could see into the large room through a small pane of glass let into the door. When every one save the beggar was out of the room, she observed the man draw himself up from the floor, seat himself at the table, extract a brown withered human hand from his pocket, and set it upright in the candlestick; he then anointed the fingers, and, applying a match to them, they began to flame. Filled with horror, the girl rushed up the back stairs, and endeavored to arouse her master and the men of the house; but all in vain—they slept a charmed sleep; and finding all her efforts ineffectual, she hastened down stairs again. Looking again through the small window, she observed the fingers of the hand flaming, but the thumb gave no light; this was because one of the inmates of the house was not asleep. The beggar began collecting all the valuables of the house into a large sack. No lock withstood the application of the flaming hand. Then, putting it down, the man entered an adjoining apartment. The moment he was gone, the girl rushed in, and

seizing the hand, attempted to extinguish the quivering yellow flames which wavered at the fingers' ends. She blew at them in vain; she poured some drops from a beer-jug over them, but that only made the fingers burn the brighter; she cast some water upon them, but still without extinguishing the light. As a last resource, she caught up a jug of milk, and dashing it over the four lambent flames, they went out immediately.

Uttering a piercing cry, she rushed to the door of the room the beggar had entered, and locked it. The whole house was aroused, and the thief was secured and hung.

We must not forget Tom Ingoldsby's rendering of a similar legend:—

Open, lock,
To the Dead Man's knock!
Fly, bolt, and bar, and band!
Nor move, nor swerve,
Joint, muscle, or nerve,
At the spell of the Dead Man's hand!
Sleep, all who sleep!—Wake, all who wake!
But be as the dead for the Dead Man's sake!
Now lock, nor bolt, nor bar avails,
Nor stout oak panel thick-studded with nails.
Heavy and harsh the hinges creak,
Though they had been oiled in the course of the week.
The door opens wide as wide may be,
And there they stand,
That murderous band,
Lit by the light of the GLORIOUS HAND,
By one!—by two!—by three!

But instead of pursuing the fable through its further ramifications, let us apply the schamir of comparative mythology to the myth itself, and see whether before it the bolts do not give way, and the great doors of the cavern of mysteries expand, and discover to us the origin of the superstitious belief in this sea-prince's worm, the stone of wisdom, sesame, forget-me-not, or the hand of glory.

What are its effects?

It bursts locks, and shatters stones, it opens in the mountains the hidden treasures hitherto concealed from men, or it paralyzes, lulling into a magic sleep, or again it restores to life.

I believe the varied fables relate to one and the same object—and that, the lightning.

Now all this is very interesting, but we think our readers will feel that it is as arbitrary as interesting. The bird which bears schamir, the worm or stone which shatters rocks, is the storm-cloud; that storm-cloud is, to Mr. Gould, the raven of Oden, and the Roc of the "Arabian Nights" which broods over its great luminous egg, the sun, and which haunts the sparkling valley of diamonds, the starry sky, while the lightning becomes that heavenly flower,

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blue, or yellow, or red. St. George finds a strong and vigorous vindicator in Mr. Gould, after the long suspicion to which he has been subjected, principally from the well-known paragraph in Gibbon; but, with his usual scepticism, Mr. Gould pretty completely dissolves the personality of the saint he seeks to vindicate; to him St. George is Tamuz, or Adonis, or Osiris, for they are all identical, and these again seem to be resolvable into the solar myth, or the conflict of the sun with the cloud, light with darkness. This seems to our writer the venerable myth which from the heathen nations of Europe perpetuated itself under a Christian creed, making the hero one of the chief, most venerated, and popular of all the saints of the Chronicles. Thus it is one of the illustrations of Mr. Gould's usual method of divesting every myth he touches of every claim to personality by succession of correspondences, which, while they assuredly show extensive reading, all alike tend to rob the mind of faith in any person or thing, and most curiously suppose that all generations are the creatures of the mere fancies of preceding generations. Our object is not particularly to reply to Mr. Gould, so much as to point out some characteristics of his book. St. George is certainly one of the most remarkable myths, one most truly answering to that term, which could be selected; his existence has been doubted altogether. The guardian confessor of the purest faith, he has been supposed to be an Arian. Mythology and fable tell the story of his great conflict with the dragon, and therefore Mr. Gould finds him synonymous with Mithra, Sigfried, and Sigard; but it should be remembered that in those ages the great beast-killer would be a very popular form of heroism, and the impersonation of some cruel and treacherous evil, or tyrant, beneath the ideal, or impersonation of the dragon, would be as likely in one age as another, and all very likely to produce such a form of the heroic without dissolving the person altogether in the symbol of the conflict of day and night. Mr. Gould has a theory to serve, or we suppose he would have been disposed to have made something more of the elaborate defence for the personality of St. George put forth

in the volume of Peter Heylin.* We are certainly not particularly interested in preserving the personality of St. George; but the instance in Mr. Gould's present volume is like that of William Tell in his last; and beneath his dissolving and impersonal criticism, characters and events fade and fall away like clouds, because the author seems to be quite unable to believe in historic parallels, or is disposed to attempt in every myth that meets him some Hindooistic or pantheistic interpretation from the operations of nature. As we have already intimated, we like him better as a story-teller than as a philosopher; certainly his mental activity is considerable. The "Silver Store" is a collection of versifications of Jewish and mediæval stories which will strike the reader as fresh rather in their setting than in the fact. We think our readers will have seen most of them in some form before. Our writer, with his usual modesty, says, "The author thinks it only fair to himself to add, that some of the most *piquant* stories in this collection are, in their original form, wholly devoid of point;" but perhaps there is a little prejudice in this. The Talmud, and the monkish legends, and the local traditions of old cities furnish abundant anecdotes which might be profitably and pleasantly rendered in rhyme. Southey was a great master at this kind of work; but verse or poetry would not seem to be in any special sense Mr. Gould's vocation.

The anecdotes illustrated, however, cannot claim, we think, usually the merit of freshness; while most readers will still wish, as the author has given the title of the volume containing the story or anecdote, that he had given the extract or the anecdote in some note of information. A glance through such a little volume as Mr. Gould's does leave upon the mind a sense of regret that such a world of buried wealth and literary coin as those with which the old chronicles abound, should not be dug up from their deep places. Who knows anything of them? and who can know? Cæsar of Heisterback, for in-

stance, shall we ever know that old chronicler better than we do? he must be a perfect mint of stories and monkish legends, such as were recited by the old monastic kitchen fire. Kenelm Digby spreads over his perplexing pages a number of these as of other like garrulous old story-tellers; but the large wealth of legend must be altogether unknown, buried away, rapidly going to the worms and the dust. Human nature would not gain much, very likely, by their publication; but as curious illustrations of a mind-life now dead and almost extinct, they certainly present many features of interest; they also are a department of folk-lore, and might be well looked at in connection with Mr. Gould's apparent notion, that all traditions, legends, and pieces of popular faith and fancies, must have a generation and ancient ancestry, a remote correspondence with Arian or Seinitic legends. A freer fancy, a more individual residence in the neighborhood of the kingdoms of terror and hope than this seems to imply, would certainly, we think, be the result of such studies. Legends and popular stories are not necessarily the copious imitations of other stories. We repeat what we have said before, as history has its parallels, so has biography, and the mind of man need not be supposed to move in grooves because it unfolds resemblances. It is interesting to compare with the Curious Myths the volume of Hindoo Fairy Legends. The stories in the "Old Decan Days" are perhaps too long to create that general family interest which we find in Andersen or Grimm; but even in this, which is their least value to our minds, they will be most likely well received. Our Aesop power of giving a human soul to birds and beasts, and our Teutonic disposition to invest all circumstances with the spiritual and the marvellous, alike pervade these stories. Ancient stories in pleasing, readable modern version, probably they would many of them seem to favor Mr. Gould's generation theory of popular fable and legend. Many, if not most, seem to have the characteristics of parable, and certainly some remind us of parables used and well known amongst ourselves; one of the shortest and therefore best adapted to our purpose

* *The History of that Most Famous Saynt and Souldier of Christ Jesus, St. George of Cappadocia.* By Peter Heylin, 1633.

for quoting, will at the same time, we suppose, thus remind our readers of like forms of parabolic teaching.

THE BRAHMIN, THE TIGER, AND THE SIX JUDGES.

Once upon a time, a Brahmin, who was walking along the road, came upon an iron cage, in which a great Tiger had been shut up by the villagers who caught him.

As the Brahmin passed by, the Tiger called out, and said to him, "Brother Brahmin, brother Brahmin, have pity on me, and let me out of this cage for one minute only, to drink a little water, for I am dying of thirst." The Brahmin answered, "No, I will not; for if I let you out of the cage you will eat me."

"O father of mercy," answered the Tiger, "in truth, that will I not; I will never be so ungrateful. Only let me out, that I may drink some water and return." Then the Brahmin took pity on him, and opened the cage door; but no sooner had he done so than the Tiger, jumping out, said, "Now, I will eat you first, and drink the water afterwards." But the Brahmin said, "Only do not kill me hastily. Let us first ask the opinion of six, and if all of them say it is just and fair that you should put me to death, then I am willing to die."—"Very well," answered the Tiger, "it shall be as you say; we will first ask the opinion of six."

So the Brahmin and the Tiger walked on till they came to a Banyan tree; and the Brahmin said to it, "Banyan tree, Banyan tree, hear and give judgment."—"On what must I give judgment?" asked the Banyan tree. "This Tiger," said the Brahmin, "begged me to let him out of his cage to drink a little water, and he promised not to hurt me if I did so; but now that I have let him out, he wishes to eat me. Is it just that he should do so, or no?"

The Banyan tree answered, "Men often come to take shelter in the cool shade under my boughs, from the scorching rays of the sun; but when they have rested, they cut and break my pretty branches, and wantonly scatter my leaves. Let the Tiger eat the man, for men are an ungrateful race."

At these words the Tiger would have instantly killed the Brahmin; but the Brahmin said, "Tiger, Tiger, you must not kill me yet, for you promised that we should first hear the judgment of six."—"Very well," said the Tiger, and they went on their way. After a little while they met a Camel. "Sir Camel, Sir Camel," cried the Brahmin, "hear and give judgment."—"On what shall I give judgment?" asked the Camel. And the Brahmin related how the Tiger had begged him to open the cage door, and promised not to eat him if he did so; and how he had afterwards determined to break his word; and asked if that was just or not. The Camel replied, "When I was young and strong, and could do much work, my master took care of me and

gave me good food; but now that I am old, and have lost all my strength in his service, he overloads me, and starves me, and beats me without mercy. Let the Tiger eat the man, for men are an unjust and cruel race."

The Tiger would then have killed the Brahmin; but the latter said, "Stop, Tiger, for we must first hear the judgment of six."

So they both went again on their way. At a little distance they found a Bullock lying by the roadside. The Brahmin said to him, "Brother Bullock, brother Bullock, hear and give judgment."—"On what must I give judgment?" asked the Bullock. The Brahmin answered, "I found this Tiger in a cage, and he prayed me to open the door and let him out to drink a little water, and promised not to kill me if I did so; but when I had let him out he resolved to put me to death. Is it fair he should do so or not?" The Bullock said, "When I was able to work, my master fed me well and tended me carefully; but now that I am old, he has forgotten all I did for him, and left me by the roadside to die. Let the Tiger eat the man, for men have no pity."

Three out of the six had given judgment against the Brahmin, but still he did not lose all hope, and determined to ask the other three.

They next met an Eagle flying through the air, to whom the Brahmin cried, "O Eagle, great Eagle, hear and give judgment."—"On what must I give judgment?" asked the Eagle. The Brahmin stated the case; but the Eagle answered, "Whenever men see me they try to shoot me; they climb the rocks and steal away my little ones. Let the Tiger eat the man, for men are the persecutors of the earth."

Then the Tiger began to roar, and said, "The judgment of all is against you, O Brahmin." But the Brahmin answered, "Stay yet a little longer, for two others must first be asked." After this they saw an Alligator, and the Brahmin related the matter to him, hoping for a more favorable verdict. But the Alligator said, "Whenever I put my nose out of the water, men torment me, and try to kill me. Let the Tiger eat the man, for as long as men live we shall have no rest."

The Brahmin gave himself up as lost; but again he prayed the Tiger to have patience, and let him ask the opinion of the sixth judge. Now the sixth was a Jackal. The Brahmin told his story, and said to him, "Mama Jackal, Mama Jackal, say what is your judgment?" The Jackal answered, "It is impossible for me to decide who is in the right and who in the wrong, unless I see the exact position in which you were when the dispute began. Show me the place." So the Brahmin and the Tiger returned to the place where they first met, and the Jackal went with them. When they got there, the Jackal said, "Now,

Brahmin, show me exactly where you stood." "Here," said the Brahmin, standing by the iron Tiger-cage. "Exactly there, was it?" asked the Jackal. "Exactly here," replied the Brahmin. "Where was the Tiger, then?" asked the Jackal. "In the cage," answered the Tiger. "How do you mean?" said the Jackal; "how were you within the cage? which way were you looking?"—"Why, I stood so," said the Tiger jumping into the cage, "and my head was on this side."—"Very good," said the Jackal; "but I cannot judge without understanding the whole matter exactly. Was the cage door open or shut?" "Shut and bolted," said the Brahmin. "Then shut and bolt it," said the Jackal.

When the Brahmin had done this, the Jackal said, "Oh, you wicked and ungrateful Tiger!—when the good Brahmin opened your cage door, is to eat him the only return you would make? Stay there, then, for the rest of your days, for no one will ever let you out again. Proceed on your journey, friend Brahmin. Your road lies that way, and mine this."

So saying, the Jackal ran off in one direction, and the Brahmin went rejoicing on his way in the other.

The following is very like the innumerable impersonations of natural things which abound in German myths:—

HOW THE SUN, THE MOON, AND THE WIND WENT OUT TO DINNER.

One day the Sun, the Moon, and the Wind went out to dine with their uncle and aunt, the Thunder and Lightning. Their mother (one of the most distant stars you see far up in the sky) waited alone for her children's return.

Now both the Sun and the Wind were greedy and selfish. They enjoyed the great feast that had been prepared for them, without a thought of saving any of it to take home to their mother; but the gentle Moon did not forget her. Of every dainty dish that was brought round, she placed a small portion under one of her beautiful long finger-nails, that the Star might also have a share in the treat.

On their return, their mother, who had kept watch for them all night long with her little bright eye, said, "Well, children, what have you brought home for me?" Then the Sun (who was the eldest) said, "I have brought nothing home for you. I went out to enjoy myself with my friends—not to fetch a dinner for my mother!" And the Wind said, "Neither have I brought anything home for you, mother. You could hardly expect me to bring a collection of good things for you, when I merely went out for my own pleasure." But the Moon said, "Mother, fetch a plate: see what I have brought you." And shaking her hands she

showered down such a choice dinner as never was seen before.

Then the Star turned to the Sun, and spoke thus: "Because you went out to amuse yourself with your friends, and feasted and enjoyed yourself, without any thought of your mother at home—you shall be cursed. Henceforth your rays shall ever be hot and scorching, and shall burn all that they touch. And men shall hate you, and cover their heads when you appear."

(And this is why the Sun is so hot to this day.)

Then she turned to the Wind and said: "You also who forgot your mother in the midst of your selfish pleasures—bear your doom. You shall always blow in the hot dry weather, and shall parch and shrivel all living things. And men shall detest and avoid you from this very time."

(And this is why the Wind in the hot weather is still so disagreeable.)

But to the Moon she said: "Daughter, because you remembered your mother, and kept for her a share in your own enjoyment, from henceforth you shall be ever cool, and calm, and bright. No noxious glare shall accompany your pure rays, and men shall always call you 'blessed.'"

(And this is why the Moon's light is so soft, and cool, and beautiful even to this day.)

Without attempting any lengthy remarks, we must express our thankfulness to any competent teachers who thus furnish us with the means of drawing interesting analogies between inner life of peoples far removed and separated. The people among whom these stories are told appear to inhabit a region not very well known, yet the compiler finds many of these superstitions almost identical with those to be met with in Wales, while the superstitions of the Rakshas seem to betray a relationship to the Gin of Arabian Nights, or the Puck of our own country; and the extensive system of Cobra or serpent superstitions are interesting not merely as far as Hindoo-stani superstitions are concerned, but as adding to the extensive serpent superstitions spread over the world. All these volumes add to that large and growing literature which tends to show the amazing wealth of folk-lore and its interest as unfolding the movements of popular minds in free and unconventional circumstances. They all belong to the remote past; it seems as if we have outlived the possibility of producing such things. In the age of science,

we have passed beyond the impersonations of nature; all things yield to cold material laws. What may be the ultimate issue of this in the history of human thought it is impossible to say or foresee, but it is certainly more than entertaining. It furnishes abundant material for curious speculation to note and compare the various shadows in myth, legend, and popular fancy, which glanced from many widely separated minds in countries and ages far apart; and while we do not see the necessity of tracing them all up to some common centre, they do seem to illustrate in a striking manner the unity of the human mind, even in faith as well as in feeling.

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Macmillan's Magazine.

WOMEN PHYSICIANS.

IN January, 1849, the University of Geneva, in the State of New York, conferred upon an English woman the diploma of Doctor of Medicine.

European precedents were not wanting for thus admitting a lady to a university education and university distinction. Passing by instances recorded in the history of the Middle Ages, we find the names of several women who, during the eighteenth and the early part of the present century, received diplomas and held chairs in the Italian Universities. In 1732 La Dottoressa Laura Bassi graduated at Bologna, and was appointed to the Chair of Natural Philosophy, which she held for six years. She married and had several children. It is pleasant to find a contemporary speaking of her as exemplary in all the relations of family life, and as having "le visage doux, sérieux, et modeste." She died in 1778, and was buried with public honors—the doctor's gown and silver laurel being borne before her to the grave.

In 1750 Signora Agnesi was appointed Assistant Professor of Mathematics at Bologna. She was connected with the university for twenty years. She translated several treatises on the integral and differential calculus, and published a volume entitled "Analytical Institutions," which was translated by the then Professor of Mathematics at Cambridge.*

* Professor Colson states in his Preface, that one reason which induced him to translate Agnesi's "Analytical Institutions" was the hope that he

Towards the close of her life she retired into a religious house, and died in 1798 at the age of eighty.

In 1794 Clotilde Tambroni became Professor of Greek at Bologna. After occupying the chair for four years she was obliged, on political grounds, to resign. The revolutionary wave was then rising, and Tambroni was conservative and a royalist. She then spent some years studying in Spain. On her return to Italy, Bonaparte, forgiving her politics, made her Professor of Greek at Milan. She held this office for some years, and died in 1817.

Madonna Manzolina lectured on anatomy at Bologna about the time that Tambroni was teaching Greek at Milan.

Several other women are mentioned briefly in the "Biographie Universelle" as graduates of Bologna and Milan. We have no means of knowing if these examples were remembered by the college which admitted Miss Blackwell. Possibly the authorities of the American University thought they were doing a new thing in the history of the world, and were not deterred by thinking so.* Be that as it may, the example set by Miss Blackwell was speedily followed. In 1851 her younger sister, Emily, graduated at the College of Cleveland (Ohio); two years later a Polish lady did the same, and from that time a continually increasing number of American women have been engaged in the study and practice of medicine. The nature of the success which has attended the experiment—in so far as it has succeeded—and the causes of its failure—where it has failed—cannot be rightly understood without some knowledge of the peculiar conditions under which medical education is carried on in America. In our

might thus "render it more easy and useful to the ladies of this country, if indeed they can be persuaded to show to the world, as they easily might, that they are not to be excelled by any foreign ladies whatever."

* In our own country, where precedent is held in greater honor, it is well to know that the idea of university education for women is not only not an innovation, but that some at least of our universities must be regarded as incomplete copies of the ancient models on which they are formed until their privileges shall have been extended to female students. Glasgow, for example, was founded upon the model of Bologna, and the earliest charter given to its students "all the rights and privileges belonging to those of Bologna."

own country the students of any one school—as, for instance, those of Guy's or Bartholomew's Hospital—do not receive their diploma from the school at which they study, but from a central examining body, such as the College of Surgeons, Apothecaries' Hall, or one of the Universities. Students from every school meet at the central boards, the standard is fixed by the examining, not by the teaching bodies, and it is applied uniformly to all the schools.

In America, on the contrary, each medical school examines its own students and gives its own diplomas; there is no common standard of education; no check either upon the rapacity or the indolence of the managers of the schools. The first result of the absence of a standard examination is, that the M.D. diploma of one college may imply a really good medical education, while the same degree taken elsewhere may be almost worthless. This method has produced much that is bad in the education of men; but it has been even more injurious to women. No sooner had Miss Blackwell and her immediate successors started the idea of women physicians, than a demand arose for special schools which should educate and examine women only. With perilous haste several such schools were formed, by persons whose conception of a complete medical education was most imperfect, and who acted as if they thought that all which it was necessary for women to know could be learnt in about half the time prescribed for men. The half-measures thus initiated gained a considerable amount of popular sympathy and support; the schools so started obtained in many instances State recognition, and students have steadily flowed into them; but the meagre curriculum, and the low standard of examination—a standard so low indeed that it is said to be difficult for a student *not* to get the M.D. at some of the female schools—sufficiently explain the inferior professional position taken by most of their graduates. Women who wish to get a thorough medical education still have to seek it in one of the men's colleges.

It is difficult to imagine anything which could more effectually hinder the better class of women from taking a really good position as physicians than the existence of inferior and irresponsi-

ble colleges, having the power to grant diplomas and the inclination to grant as many as possible. It is fair, however, to mention that as several of the large general hospitals in America are open to students of both sexes, it is possible for women to supply some, at least, of the deficiencies of their education.

In 1860, Miss Garrett began to study in London. It is unnecessary to detail the history of her various attempts to gain admittance to a school as a regular student. Failing in all these attempts, she obtained permission from Apothecaries' Hall—the only examining body who had no power legally to refuse to examine her—to attend the required lectures of recognized Professors privately, and having in this way completed the curriculum, she passed the examinations of the Hall, and received in 1865 the diploma of L.S.A. or Licentiate of the Society of Apothecaries.

In January, 1867, three other ladies passed the preliminary examination in Arts at Apothecaries' Hall. It was their intention to get the medical education by means of private lectures, and, on the strength of the permission previously granted to Miss Garrett, they had already begun to attend private courses of instruction in Anatomy and Chemistry. But the road was not allowed to remain thus open. Shortly after the Arts examination, the Court of Examiners at the Hall passed a resolution forbidding students to receive any part of their medical education privately. It was determined that students who had not attended lectures in the *public* class of a recognized medical school should not in future be accepted. Obviously, this resolution could only refer to women. Students to whom the public classes are accessible are not likely to wish to attend private lectures. It is not, however, necessary to assume that the resolution implied hostility towards female students. A worthier motive may have been the fear lest an education gained by private lectures might be in many cases both unsystematic and imperfect. Such a fear would be by no means groundless. In the study of medicine there is much to be learnt which cannot be tested in an examination. The Examining Board must trust a good deal to the schools. They

look to them to provide a complete and orderly course of instruction for the student; and the examination is to ascertain the amount of knowledge he actually possesses. It is possible that the permission to take private lectures was given to Miss Garrett in consequence of a mistaken notion that her case was quite exceptional,—that other women would show no readiness to follow her example; and when this impression was corrected by experience, the Examiners may have felt bound to consider what would be the permanent effect of allowing a considerable number of women to enter the profession with an education less systematic than that prescribed for men.

But, whatever the motive, the effect of the resolution is to render it impossible for female students to comply with the regulations of the Hall. It has been decided that only the students of a public and recognized school of medicine may present themselves for examination; none of the existing schools admit women, and, therefore, they cannot be examined at Apothecaries' Hall.

To the ladies whom this decision immediately affects, and to their friends, the question naturally presents itself, "What can be done? Is it absolutely essential that female students should pass some one of the examinations prescribed for men? Is there no simpler course by which they may qualify themselves to practise?"

It is most natural, too, that others should go still further in the same direction, and should say, "If it be true that the diploma of Apothecaries' Hall is the only legal road open to women, that this can be pursued in but one way, and that way is at present inaccessible, why need we make the possession of that diploma a *sine qua non* for women who study medicine? Why should we not make a beginning at once, teach women as much as is at present possible; teach them, perhaps, one special branch of practice; form a board of examiners composed of men not less well instructed than the examiners of any recognized board; and give women the certificate of this special board in the place of the diplomas held by men?"

Two proposals are here suggested, which it would be well for the sake of clearness to consider separately. The

first is, that women could with advantage practise a special branch of the doctor's art, even if there are theoretical and practical objections to their receiving a complete medical education. The second is, that whether women limit themselves to the study of a specialty, or attempt the general study of medicine, it is not necessary to insist upon their sharing the examinations intended for men; that a special certificate held only by women would answer every purpose, and could be gained with far less effort than one identical with that held by men.

On the first of these propositions we shall say but little. There is no doubt that women can be trained as midwives, and that they may become very skilful in this department without any but the most rudimentary knowledge of the art of medicine. Whether it is on the whole desirable that this department should be separated from the rest of the medical art is a question which could scarcely be fully discussed in this place, and which we are not now called upon to answer. There is, however, no reason why those who desire such a separation should not at once begin to train educated women as midwives. It is their duty to say distinctly that this is what they propose to do. The ground they take is perfectly legitimate, and they can afford to take it fearlessly. They are only to blame, if, intending to educate women as midwives, they say to the public that they are educating them as *Physicians* for women and children.

The second proposition is one of far greater importance, and deserving the careful consideration of all who desire to see women admitted into the profession of medicine: "Is it really necessary that they should take the same footing as men? Is it right to urge it, if by so doing we exclude from the profession for some years all but a very small number of women?"

We believe it is impossible to overestimate the importance of answering rightly a question so fundamental as this. "Depend upon it, the strength of any party lies in its being *true to its theory*. Consistency is the life of a movement."* The fate of every reforming

* Newman's *Apologia pro Vita sua*, p. 308.

party is decided at some critical moment by the insight and the firmness of its leaders; its safety lies in the unyielding hold they keep on principles which constitute its *raison d'être*. At whatever apparent sacrifice of the spirit of conciliation—at whatever loss of valued allies—however opposed it may seem to the dictates of policy, the central ideas of the movement must be maintained.

In the case before us, the principle which we conceive no arguments either of benevolence or of convenience should induce the leaders of the party to abandon, is that of professional equality—a common standing-ground, be it high or low, for men and women. If the existing standard be high, let women by no means be satisfied with any less attainment; if it be low, let them join with men in laboring to raise it. No one, indeed, confessedly desires that the professional training of women, if they are to practise medicine at all, should be less good than that of men. But it is alleged that a separate and special standard would not interfere with the excellence of the education; that women could, if they liked, fix their standard as high as that of the University of London, instead of contenting themselves with an examination equivalent to that of Apothecaries' Hall. The answer to this is, that a separate examination would be entirely without prestige either among members of the profession or the public, and the practical consequences would be that the examination itself would sink to the level of its reputation. Moreover, we believe that in this case the principle would be sacrificed for a nominal or fictitious rather than for a real advantage. If women are resolved to have an education not less thorough than that of men, how would a separate examination help them to get it? The requirements of the existing examining bodies are not unreasonable, and if the education is indeed to be good, why not adapt it from the first to a standard already known and of definite value? The special examination would in no way help to remove the chief difficulty women will have to overcome—the difficulty, namely, of getting hospital practice; they would still have to choose between establishing a large general hospital for themselves, or gaining admission

to one already organized for students. They would still have to form a school in which the students should receive a complete course of theoretical instruction, and they would have to do so in the teeth of an immense majority of the best men in the profession. The prejudice which now exists against allowing women to practise medicine is, we believe, unreasonable; but the opposition medical men would offer to any change by which women should be allowed to enter the profession by a private door—a door which could be made as wide and as easy to enter as they might choose it to be—would be both reasonable and praiseworthy. In the interest of the public—in the interest especially of those women who prefer being attended by a physician of their own sex—every woman who wishes to practise medicine should be compelled to conform to the regulations and pass the examinations which have been found desirable in the case of men. It should not be left to an untried and unrecognized body to fix the standard of examination and the method of preliminary study. The very fact that there is a demand for women physicians increases the importance of insisting upon a high and defined standard, separating not women from men, but the educated from the ignorant, and authorizing the educated only to practise.

In the mean time the choice does not lie between doing what is immediately possible and doing nothing, but between attaining an excellent result in fifteen or twenty years, or a poor and possibly mischievous result in five or six. English women who wish to study medicine need not consider the road completely shut to them because it is not open in their own country. They can, in the mean time, avail themselves of the opportunities afforded in America, or at some of the continental universities, of obtaining a complete medical education, and a legal qualification to practise.

The University of Zurich has already conferred the M.D. diploma on a lady, Mlle. Souslava, who began to study medicine at St. Petersburg in 1862. Her experience, and that of her companions in Russia, is not the least interesting episode in the history of medicine studied under difficulties. In company with several other ladies,

Mdlle. Souslava attended for two years the lectures on natural philosophy, chemistry, and anatomy, at the Medico-Chirurgical Academy at St. Petersburg. During this time no objection was made to their presence either by the professors of the faculty of medicine or by their fellow-students. Suddenly, however, to the surprise of every one, an order came from the Imperial Government forbidding the professors to admit women to the scientific classes of the Academy. The reason given was that, in the opinion of the Government, "women did better *as such* when they knew nothing and understood nothing."

With one exception—to be presently explained—the female students were thus compelled to leave the classes. Mdlle. Souslava resolved to try her fortunes abroad, and, after some delay, gained admission to the University of Zurich, where she has completed her medical education, and taken the diploma of M.D.* She now intends to seek admission once more to the medical examinations at St. Petersburg, in order to obtain a legal qualification to practise in her own country.

The exception just alluded to is thus explained. A few years before Mdlle. Souslava entered the medical school at St. Petersburg, several of the wild tribes of Russian Asia had petitioned the Government to send them out properly qualified women to act as midwives. Their petition was granted, the Government undertaking all the expense of the education and maintenance of a certain number of women for this purpose. After a time, one of these tribes (the Kirgesen) petitioned, further, that the women thus sent to them should also be taught some branches of the art of medicine. One of the women then being trained as a midwife, hearing of this petition, wrote to the Kirgesen, proposing that she should study medicine thoroughly, and go out to them as a qualified doctor. She suggested, at the same time, that they should try to get permission for her to enter the Academy of St. Petersburg as a regular medical student. The Kirgesen welcomed the proposal, wrote to an influ-

ential Russian general, and through him obtained an official document empowering their future doctor to attend the Academy as a student. They have regularly sent money for her education and maintenance, and from the first have taken the greatest interest in her progress and welfare, requiring among other things periodical bulletins of her health. Hearing last summer that she was not well, they sent money for her to go abroad for her holiday, and asked for an extra bulletin. In consequence of the special permission thus received, she was allowed to remain when the Academy was closed to her companions.

Returning to Zurich, it is satisfactory to find that the course of study prescribed for its medical students is identical, in all important respects, with that pursued in England and Scotland.

It is not likely that any difficulty will arise about registering a good foreign diploma, when its holder wishes to practise in this country. It is true that the possession of such a diploma has not, since the Act of 1858, entitled its possessor to be registered here; but the Medical Amendment Bill will remove the difficulty, by providing that some at least of the best foreign and colonial diplomas shall again be accepted and registered in England. But even with this difficulty removed, it is disappointing to some to be told that it is only by obtaining a foreign diploma that they can qualify themselves to practise legally in this country. The method proposed is at the best slow and laborious, and, to English-bred women unused to travel, it is disheartening to hear that they must study on the Continent or in America for four or five years before they can practise at home.

The alternative, however, unattractive as it is, has already been accepted by three English ladies, who will in all probability ere long be followed by others; and though we may regret that their path should be unreasonably hard, it is consoling to bear in mind that the very severity of the test thus voluntarily undergone is in itself an augury of success. With such women, with students whose steadiness of purpose has been put to the proof and has not swerved, Englishmen cannot fail to sympathize, and to their influence as it

* The degree was conferred Dec. 14th, 1867.

gradually makes itself felt the ultimate victory of the movement will be due.

The prejudices now existing among medical men will be removed most easily and most surely by every woman who comes into this country as a legally qualified practitioner, devoting herself for at least ten years to the legitimate and steady work of the profession she has entered. If any woman can win for herself a scientific position equal to that now held, for example, by Dr. Jenner or Mr. Paget, she will remove in winning it almost every prejudice and every difficulty from the path of her successors. For it ought to be gladly acknowledged that many a man's prejudice against women-doctors has its root in his hearty interest in the art or science of his profession. Men are so much in the habit of seeing women content themselves with trifling, that they distrust the gravity of their purpose with regard to serious study. They suspect them of being actuated by any motive rather than that of genuine interest in the profession. Once convince a man whose opposition has its root in this distrust, that a woman does really care for the work itself, and his prejudice melts away, and he becomes her friend and ally.

The truth is, that both the professional and the non-professional public have to be converted to the *idea* of women-physicians, and that till they are so converted it will be vain to ask for co-operation on any large or public scale. We do not wish to ignore the fact, now placed by experience beyond dispute,* that a very considerable number of women of all classes are glad to avail themselves of the services of a woman doctor. The cordial response given to what has already been accomplished is no small encouragement to the advocates of the movement, but we would suggest that the number of con-

verts gained from the somewhat narrow ground of personal experience or personal preference ought to bear only a small proportion to the number gained by a just and careful consideration of the merits of the question. It is gratifying to find many women saying, "We distinctly prefer a woman physician," but it is of far more importance to teach men and women alike to say, "Whatever our personal preferences or the preferences of our wives and daughters may be, it is right that women should be allowed to study and practise medicine, and we are willing to give them every facility for doing so." This is not what is now said; the proposal is for the most part supported on personal grounds, and opposed on public or theoretical ones. The argument, "I like it," which many women are ready to use, is met by the assertion that they ought not to like it, or that at least they ought not to be allowed to have what they like. The statement that a woman prefers consulting a woman-doctor is treated with scarcely more respect than would be accorded to her if she expressed a preference for the British College of Health or any other irrational quackery.

Passing on from the consideration of practical difficulties, let us ask—"Is it desirable that women should study and practise medicine? Have we decided that the principle involved is one we shall do well to support? Are the objections brought against it sound and reasonable, or are they for the most part mere prejudices suggested by the instinctive conservatism of ignorance?"

It is well to remember what the objections really are. It is sometimes said that the study of anatomy and physiology would tend to injure or destroy the fine instinct of purity which characterizes most women. We believe that experience will prove this fear to be groundless. The serious study of a scientific subject can hardly be injurious to any one, and the possession of special safeguards or the absence of special temptations would suggest that women are peculiarly adapted to approach the science of anatomy in the attitude of students. Let those who fear the effect of anatomical study consider rather whether the evil they dread

* "Within the year 9,300 visits have been made to the Dispensary; 3,000 new cases have been admitted; from sixty to ninety patients have received advice and medicine on each consulting day; and it is seldom that a week passes in which patients do not come from a distance to avail themselves of the special advantage offered by the Dispensary.—*Extract from the First Annual Report of St. Mary's Dispensary for Women and Children.*

is not actually working in many English families. Let them reflect upon the influence of the flood of fiction poured in from circulating libraries, the food set before the hungry imaginations of the young, the unhealthy sympathies called forth in hearts which are sickening for an outlet, the familiar scenery of home life reproduced and invested with a vicious coloring, an intimate acquaintance with the ways of sin represented as a knowledge of the world which it is childish not to possess. This is the poison which women, young and old, are imbibing from day to day, while we hold them back from the reverent study of Nature, lest their innocence should be contaminated.

But we are told that, even if the study of medicine did not injure a woman morally, its practice would develop in her an unfeminine amount of self-reliance; that society would have a feeble imitation of a man in the place of its ideal woman, and that much of the graceful brightness which now sweetens and refreshes the social atmosphere would then as a consequence be lost.

It must be conceded that a woman-doctor would certainly require a considerable amount of self-reliance and firmness. Vacillation would be as fatal to her reputation as it is to a man's. Her patients must know that beneath all possible gentleness of manner there is no self-distrust, no shrinking from responsibility. The medical profession, however, would not be alone in thus developing the quality of self-reliance. Women who manage their own property and households, schoolmistresses, matrons of hospitals and prisons, and all other women engaged in a profession or business, soon find out that they cannot afford to exercise the sweet womanly grace of helplessness. But are we justified in calling it a grace? Ought our standard of what is perfect and beautiful ever to stop short of the *best* that can be reached? Would not a perfect development of feminine grace and beauty rest upon a basis of strength—moral, mental, and physical—rather than upon the absence of strength? Is not this the ideal set before us by our poets? Did Wordsworth's "Phantom of Delight" seem to him less delightful when she gained

"The reason firm, the temperate will,
Endurance, foresight, strength, and skill?"

Does not the lovely lady in "Comus" stand before us as a very type of firmness and self-reliance?—"the constant mood of her calm thoughts unstirred by loneliness and danger."

A cultivated judgment, self-possession, courage, and energy, are intrinsically good qualities, whether present in men or women, whether stamped with the approval of men or not. It is by no means true that a woman, when obliged to be self-reliant, must necessarily cease to be gentle, or become in any degree masculine. The habit of self-reliance need not engender presumption, or interrupt the exercise of any womanly grace. It does not make a woman less tender, or less sympathetic, or less generous; it certainly is not likely to make her less able to appreciate and to reverence the noble qualities of others. It does not make her delight less in order, in delicate personal and household neatness, in whatever of beauty she can afford to have around her. Indeed, one good effect of an active life is, that it increases the keenness of appreciation for all these specially feminine refinements. Every one knows how deficient in any trace of artistic feeling and love of beauty are the majority of London houses inhabited by the professional and mercantile classes where the women of the family are specially *not* active. The houses are dull and ugly, not from the want of leisure and wealth, but from the mental inactivity of the women who direct them, for it is "by knowledge that the chambers are filled with all precious and pleasant riches." Who has not suffered while waiting in the dreary dining-room or the still more dreary drawing-room? Who has not groaned in view of the dusty dulness, the wax or paper flowers under glass shades, the soiled chintz covers, the hideous needlework, the bare tables with their centrifugal system of intolerably dull books—generally old Annuals and Thomson's Seasons? May it not be that if the wives in these houses were more accustomed to mental work, if they knew how greatly it increased the value of domestic brightness and order, the rooms would wear a different aspect?

But the truth is, that what men *really* like in women is not ignorance and helplessness, but the yieldingness and affectionateness which they think belong to the same type of character. They would rather live in peace with a kindly, affectionate, indulgent companion, however dull, than embitter their lives by marrying a cultivated and sensible, but hard and unsympathizing, woman. And if this, indeed, were the alternative, few would impugn the wisdom of their choice. The error lies in supposing that there is any necessary connection between an active mind and an overbearing temper. No doubt occasional irritability is in some cases induced by long-continued mental tension, but this is not what renders any one habitually uncongenial as a companion.

If it be said that women of the stronger sort are often somewhat defiant in their tone towards society, it may be replied that, perhaps, they are forced into pugnacity by the attitude of society towards them. In their own homes many of them are as docile and yielding in minor matters as the weakest of their sex; and this in spite of having been, as it were, trained to warfare.

It is sometimes hinted that men *do* like women to be weak and passive, because it makes them feel their own superiority. It is true that a woman whose standard is high will always be more exacting, both towards herself and her friends; more critical, and therefore less flattering, than one who is satisfied with less. The possession of a distinct and noble ideal of what is excellent limits the range within which the faculty of admiration can be exercised. But surely none but the meanest men would wish to degrade women in order to gratify so ignoble a vanity.

The doubt sometimes expressed as to whether average women have sufficient force of brain to justify the hope of success in a pursuit which makes a considerable demand upon mental power, is difficult to answer in the absence of data to go upon. Till women have the same educational advantages as men there can be no basis of comparison. All women who do anything are self-made, and can only be fairly compared with self-made men. The achievements in science and literature of such women as Mrs. Somer-

ville, Harriet Martineau, Anna Swanwick, and the author of "Adam Bede," must be taken as representing, besides what is actually accomplished, a reserve of force expended in overcoming special obstacles. For women have to contend not only with the negative drawbacks of incomplete education and a secluded life, but also with that peculiarly subtle and deadening influence which consists in feeling constantly—or, at least, till they have conquered a high place for themselves—that nothing very good is expected from them. Among all the heavy burdens and discouragements which weigh them down, there is, perhaps, none more universally depressing.

The exceptionally strong, no doubt, rise above it. But a portion of their strength is consumed in the struggle. Effort cannot be put forth without corresponding exhaustion. In the meantime the success which has been attained by women, in the face of peculiar difficulties, encourages a sanguine estimate of what they may do under more favorable circumstances.

The same consideration must be borne in mind while dealing with the further question, *Have women sufficient physical and nervous strength to endure so arduous a life? Will they not break down in the attempt?*

It is tolerably easy to answer this question in so far as it relates to the influence of the mere study of medicine on the health of the student. No one who knows what the course of study really is, doubts that women of good average health could prepare themselves for examination without any undue tax upon either their mental or physical powers. The important part of the question is that which relates to the after-life of practice as a physician.

Are women strong enough for that? In the absence of experience we can but suggest a few considerations which tend to reassure us on this point. It may be noticed, in the first place, with regard to physical strength, that wherever it is needed in other callings women are not, as a rule, incapacitated by the want of it. A physician would not need to be so strong as a nurse, a washerwoman, or a charwoman. She might be much weaker physically than the woman who stands behind a counter or who does

needlework for fourteen hours daily. Moreover, the demand for both muscular and nervous strength comes gradually to a physician. During the first few years of professional life he is not overwhelmed with work, and he has time to become accustomed to a fair amount of exertion. When in really full practice, he can afford to spare himself much fatigue, as for instance by keeping a carriage instead of using cabs or walking. The same is true of night work. Inexperienced people are apt to think that, because a doctor is sometimes called up, he scarcely ever gets a good night's rest; whereas the truth probably is, that a physician in even large practice is not often called up more than once or twice in the week.

One piece of evidence of some importance may be mentioned upon this point. Many of the midwives employed by the Royal Maternity Charity have an amount of practice which in the number of cases greatly exceeds that of any physician practising among the wealthy classes. One of these women, whose skill and kindness render her a great favorite with her patients, is also employed by the Marylebone Dispensary. She attends as many as nine hundred patients annually, *i. e.*, an average of about three every twenty-four hours, exclusive of Sundays. She not only goes to each patient's house when first summoned, and acts as both doctor and nurse, but after the birth of the child she visits and attends to the two patients for several days. She never expects to pass a night in peace; she walks to all her patients; she has been thus employed for some years, and she is at the present time a remarkably healthy and vigorous woman.

With regard to the mental strain involved in a physician's life, it must be remembered that there is a good deal of practice which does not bring anxiety. A young physician is more or less anxious about all but the most trivial cases when he has not much practice. As his experience widens he finds the work more easy, and the proportion of cases which tax his nervous strength does not very rapidly increase. For some years, too, it is his duty to obtain in all serious cases the support of an opinion based upon wider experience

than his own, and by doing so he is relieved of much of the responsibility and anxiety he would otherwise incur. Moreover, as his knowledge increases he learns to recognize the cases in which the failure of his art is certain, cases beyond the skill of any physician; he sees what is *not* to be done, and from that moment is anxious only to relieve suffering: he cannot be anxious about a result which is beyond his control.

An appointment in a public institution is usually held by a young practitioner before entering upon private practice, and is most useful in accustoming him to the responsibilities of his profession. A conscientious physician, who thinks both of his patient and of science, is as anxious to do his best, and to do it in the best way, for hospital or dispensary as for private patients. But perhaps from seeing a great number of patients, apart from their surroundings, he learns to think more of the science and less of his own responsibility. His thought is, "I have done my best; I have tried diligently to fit myself for judging what is best; I am not responsible for more." Moreover, encouragement comes continually; by the side of some disappointments he has to place many successes.

It is possible, however, that some women would be unable to free themselves from what might become an intolerable burden of anxiety. Also to some the constant sight of suffering would be more than could be borne without serious injury to health. The condition of exalted, almost morbid sensibility, in which every sense is supernaturally acute and every mental act a keen excitement—the condition which, in the absence of an English name, is known as *l'état nerveux*—would certainly unfit its victim for the work of a physician. But happily this is a rare and exceptional condition, and one which a life of unselfish and varied activity is the least likely to engender. In considering the effect any proposed change in the lives and habits of women may possibly have upon their health, we must not forget what may be urged against the mode of life now prescribed. It is conceivable that a life of greater activity and of increased responsibility might be found too

exacting in some individual cases. What we have to consider is whether this risk is worth incurring. No one knows how many women there are whose physical and mental health is now destroyed by the dreary vacuity of the lives they are compelled to lead. It is not true that enforced idleness—a life empty of any keen interest—empty of invigorating moral and intellectual discipline—is merely “rather dull.” It is terribly demoralizing. It is the immediate parent of hysteria, insanity, and vice.*

An objection of even greater practical weight is, that if woman entered the medical profession one of two things would happen; either they would marry, and by so doing lose the benefit of all that had been spent on their professional education, or they would be tempted to abandon their natural sphere as wives and mothers, and in fact to give up their *raison d'être*. Assuming for a moment that a married woman could not practise as a physician, and that therefore a woman would have to choose between marrying and remaining in her profession, it may be fairly asked if to have such a choice would be a misfortune either to herself or to any one else? Is it desirable that women should be *driven* into marriage by the erection of artificial barriers before every other path leading to happiness and dignity? Would any man like to think he had been taken into the holiest and closest of relationships as the only mode of escape from an *ennui* which was rapidly becoming intolerable? Men give up a good deal for the sake of marriage: would it injure a woman to have something to give up also? A profession which brings to those who practise it worthily a source of keen and lasting interest, and the dignity of a good social position, would remove the humiliation of celibacy, while it would not hinder the right kind of marriage.

But it is not necessary to assume that a woman must certainly abandon her profession if she marries. This would not be the result if she had no children. Childless wives—and they number one-eighth of all married women—are not much less in need of an occupation than

they were before marriage; and a woman who had previously had the care of a house in addition to her professional work, would find no difficulty in combining both duties afterwards. The fact of her marriage would perhaps increase the value of her services as a physician to some of her patients. Even if she had children, it is difficult to see why she should not retain her consulting-room practice, although it might be necessary to give up some of the general family visiting. In the lower branches of the profession, where the consulting-room practice bears a very small proportion to the visiting, a married woman with children could still share the practice with her husband if he were a doctor. They could work together as partners even if, owing to her other duties, she could not undertake as much of the work as he did.

In thus expressing our opinion that women physicians need not consider themselves pledged to celibacy, it must be understood that we refer only to those who have completed the course as students, and have gained a foothold of their own in the profession by some years of steady and diligent work as general practitioners, or as physicians. If they choose to marry before or immediately after receiving their diploma, they must be prepared to give up the hope of attaining eminence in their profession, or indeed any independent position at all. Even in this case they would probably have no cause to regret their knowledge of medicine.

But, turning from the consideration of all that has been said against the study of medicine by women, we may ask what there is of positive advantage to be pleaded in favor of such an innovation. Has the profession of medicine any intrinsic advantages? Can any of these be said to apply with less force to women than to men? What is the legitimate influence of the study of medicine on the student? of the study and practice on the physician?

At the present time, when we are perhaps about to pass into the stage of reaction against classical and in favor of scientific education, it would be superfluous to dwell at any length upon the advantages to be derived from the study of science. It is, doubtless, pos-

* See Maudsley's “Physiology and Pathology of the Mind.”

sible to exaggerate the result which the medical student may expect to gain from the introduction to science. But even the minimum effect can scarcely fail to do good. It is no small intellectual benefit to be made capable of perceiving law and order in every subdivision of science, of recognizing the harmony which exists among them. Many of the details of botany, zoology, anatomy, and chemistry will inevitably be forgotten by students who only take up these subjects on their way to medicine; but in most cases, the leading principles, the most important generalizations in each science will remain in the mind as a permanent possession of great value. To be made capable, for instance, of keenly enjoying such a book as Grove's "Correlation of the Physical Forces" is no trifling or temporary advantage. It is a gain for life.

Advancing to the study of medicine proper, *i.e.*, medicine at the bedside, the student is first taught to observe accurately, to acquire the habit of intellectual patience, the habits of order and of diligence. He is compelled to reason as well as to observe, to apply as well as to collect facts; and he gets this discipline while studying a profession which is eminently worth studying,—one which justifies whatever of diligent labor is bestowed upon it. The more important advantages to be derived from the practice of medicine, include all those first gained by the student. The physician is still a learner; the practice of his profession is still its study; if he would advance, he must never lose the reverence for truth, the habits of diligence and order acquired as a student. But other and more valuable discipline comes to him who is prepared to receive it. The physician is brought into close and friendly contact with all classes of his fellow-creatures; he is peculiarly able to enter into many of the special difficulties, temptations, and burdens of each; he knows far more than most men do of the mass of suffering beings in a city like this; "of the ignorance, recklessness, and self-indulgence too often found side by side with the most terrible poverty, each reproducing and increasing the other." The sick man, full of sores, lying at our

gates, is known to no one better. But the observant physician sees too much to be able to cheat himself into the belief that all the misery before him is chargeable on the faults which accompany it, or that the responsibility of these is chargeable on that class alone which exhibits them most strikingly. He does not find much comfort in the trivial palliative remedies suggested or applied by the easy good-nature of individuals. Coming into immediate contact with the poor, he sees that the habit of providence is directly discouraged by fortuitous benevolence; he is compelled to inquire for some sounder way of helping them. He is forced to desire large measures of reform in education; to desire everything which will tend to develop the intelligence of the poor, and strengthen in them the habits of industry, temperance, and self-restraint. It is his privilege—if he can but resist the hardening influences of an accumulation of details in daily life, and bring with the art of healing the sympathy of brotherhood—to bear witness in perhaps the most intelligible way for the Divine Healer and Brother of mankind.

Nor is it only when among the poor that the true physician needs a spirit rich in sympathy, and tenderness, and wisdom. The winnowing moments are not few when the chaff of unreal beliefs and worldly commonplaces is swept away in his presence, and he stands—alas! how dumb and empty!—before one whose eyes plead for whatever of light he has to offer. They are moments of spiritual discipline of the highest, the most searching kind?

Need we say more? Can it be that either the study or the discipline of such a life would be less valuable to a woman than to a man, or that her nature unfits her to respond to such training?

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Macmillan.

THE SUN AS A TYPE OF THE MATERIAL UNIVERSE.

BY BALFOUR STEWART, LL.D., F.R.S., AND J. NORMAN LOCKYER, F.R.A.S.

THE PLACE OF LIFE IN A UNIVERSE OF ENERGY.

THERE is often a striking likeness between principles, which nevertheless belong to very different departments of

knowledge. Each branch of the tree of knowledge bears its own precious fruit, and yet there is unity in this variety—a community of type that prevails throughout. Nor is this resemblance a merely fanciful one, or which the mind conjures up for its own amusement. While it has produced a very plentiful crop of analogies, allegories, parables, and proverbs, not always of the best kind, yet parables and proverbs are or ought to be not fictions, but truths.

We shall venture to begin this article by instituting an analogy between the social and the physical world, in the hope that those more familiar with the former than with the latter may be led to clearly perceive what is meant by the word ENERGY in a strictly physical sense. Energy in the social world is well understood. When a man pursues his course undaunted by opposition, unappalled by obstacles, he is said to be a very energetic man. By his energy, we mean the power which he possesses of overcoming obstacles; and the amount of his energy is measured by the amount of obstacles which he can overcome, by the amount of work which he can do. Such a man may in truth be regarded as a social cannon-ball. By means of his energy of character he will scatter the ranks of his opponents and demolish their ramparts. Nevertheless, such a man will sometimes be defeated by an opponent who does not possess a tithe of his personal energy. Now, why is this? The reason is that, although his opponent may be deficient in personal energy, yet he may possess more than an equivalent in the high position which he occupies, and it is simply this position that enables him to combat successfully with a man of much greater personal energy than himself. If two men throw stones at one another, one of whom stands on the top of a house and the other at the bottom, the man at the top of the house has evidently the advantage.

So in like manner, if two men of equal personal energy contend together, the one who has the highest social position has the best chance of succeeding.

But this high position means energy under another form. It means that at some remote period a vast amount of

personal energy was expended in raising the family into this high position. The founder of the family had doubtless greater energy than his fellow-men, and spent it in raising himself and his family into a position of advantage. The personal element may have long since vanished from the family, but it has been transmuted into something else, and it enables the present representative to accomplish a great deal, owing solely to the high position which he has acquired through the efforts of another. We thus see that in the social world we have what may be justly called two kinds of energy, namely—

1. Actual or personal energy.
2. Energy derived from position.

Let us now turn to the physical world. In this, as in the social world, it is difficult to ascend. The force of gravity may be compared to that force which keeps a man down in the world.

If a stone be shot upwards with great velocity, it may be said to have in it a great deal of actual energy, because it has the power of overcoming the obstacle interposed by gravity to its ascent, just as a man of great energy has the power of overcoming obstacles.

This stone as it continues to mount upwards will do so with a gradually decreasing velocity, until at the summit of its flight all the actual energy with which it started has been spent in raising it against the force of gravity to this elevated position. It is now moving with no velocity, and may be supposed to be caught and lodged upon the top of a house.

Here, then, it rests, without the slightest tendency to move, and we naturally inquire: What has become of the energy with which it began its flight? Has this energy disappeared from the universe without leaving behind it any equivalent? Is it lost for ever, and utterly wasted? Far from it, the actual energy with which the stone began its flight has no more disappeared from the universe of energy than the carbon which we burn in our fire disappears from the universe of matter.

It has only changed its form and disappeared as energy of actual motion in gaining for the stone a position of advantage with respect to the force of gravity.

Thus it is seen that during the upward flight of the stone its energy of actual motion has gradually become changed into energy of position, and the reverse will take place during its downward flight, if we now suppose it dislodged from the top of the house. In this latter case the energy of position with which it begins its downward flight is gradually converted into energy of actual motion, until at last, when it once more reaches the ground, it has the same amount of velocity, and therefore of actual energy, which it had at first.

Thus we have also in the physical world two kinds of energy: in the first place we have that of actual motion, and in the next we have that of position. We see from this how intimate is the analogy between the social and the physical worlds as regards energy, the only difference being that, while in the former it is impossible to measure energy with exactness, in the latter we can gauge it with the utmost precision, for it means the power of performing work, and work (it is needless to mention in this mechanical age) is capable of very accurate measurement.

There are several varieties of energy in the universe, and, Proteus-like, it is always changing its form. Had it not been for this habit we should have understood it long since, but it was only when its endeavors to escape from the grasp of the experimentalist were of no avail, that it ceased its struggles and told us the truth.

All of these varieties may, however, be embraced under the two heads already mentioned,—namely, *energy of actual motion* and *energy of position*.

A railway train, a meteor, a mountain torrent, represent *energy of motion*, but there is also invisible molecular motion which does not the less exist because it is invisible. Such for example is heat, for we have reason to believe that the particles of hot bodies are in very violent motion. A ray of light is another example of *energy of motion*, and so likewise is a current of electricity; and if we associate the latter with a flash of lightning, it ought to be remembered that the flash is due to particles of air that have been intensely heated by electricity becoming changed in-

to heat. Electricity in motion is pre-eminently a silent energy, and it is only when changed into something else that its character becomes violent.

Then, again, as representing *energy of position* we may instance our stone at the top of the house, or a head of water, both of which derive their energy from their advantageous position with respect to gravity.

But there are other forces besides gravity. Thus a watch newly wound up is in a condition of visible advantage with respect to the force of the mainspring, and as it continues to go it gradually loses this energy of position, converting it into energy of motion. A cross-bow bent is likewise in a position of advantage with respect to the spring of the bow; and when its bolt is discharged this energy of position is converted into energy of motion.

Besides this, there are invisible forms of energy of position.

When we tear asunder a stone from the earth, and lodge the former on the top of a house, we obtain visible energy of position, the force *against* which we act being *gravity*.

But we may also tear asunder from each other the component atoms of some chemical compound, our act here being performed *against* the very powerful force called *chemical affinity*.

Thus taking a particle of carbonic acid we may tear asunder the oxygen from the carbon, and, if our scale of operations be sufficiently great, we shall obtain separate from each other one mass of carbon and another of oxygen,—not, however, without the expenditure of a very large amount of energy in producing this separation.

We have, however, obtained a convenient form of energy of position as the result of our labors, which we may keep in store for any length of time, and finally, by allowing the carbon and oxygen to reunite,—that is to say, by burning the carbon,—we may recover in the shape of heat and light the energy which we originally expended in forcing these bodies asunder.

Some of the most prominent varieties of *energy of motion* and of *position* have now been described, and the remarks made have induced the belief that this thing, energy, this capacity which exists

in matter for performing work of one kind or another, is by no means a fluctuating element of our universe, but has a reality and a permanence comparable to that which we associate with an atom of matter.

The grand principle of the conservation of energy, a principle lately proved by Dr. Joule,* asserts that energy, like ordinary matter, is incapable of being either created or destroyed. We will endeavor to give two examples in illustration of this great law, which is worthy of the highest attention.

Let us first ask, with Rumford and Davy, When a hammer has struck an anvil, what becomes of the energy of the blow? or when a railway train in motion has been stopped by the break, what becomes of the energy of the train? A proper understanding of what here takes place will very much conduce to a clear conception of the laws of energy.

Unquestionably in both these instances energy seems to have disappeared—to have vanished, at least, from that category which embraces visible energy, and we are taught to ask if the disappearance means annihilation or only a change of form. Let us examine what other phenomena accompany this seeming disappearance. It is well known that an anvil or piece of metal repeatedly struck by a hammer becomes hot, nay, even red hot, if the process be continued long enough. It is also known that when a railway train is stopped there is much friction at the break-wheel, from which on a dark night sparks may be seen to issue. We may add to these the experiment of Davy, in which two pieces of ice are melted by being rubbed against each other. The concomitants of percussion and friction are thus seen to be in the first place an apparent destruction of energy, and in the second the apparent generation of heat; and this mere juxtaposition of the two phenomena is quite enough to suggest that in this case mechanical energy is changed into heat.

The second example to be mentioned in illustration of the laws of energy is the origin of coal or wood.

Coal or wood, as we all know, is a very concentrated and convenient form of energy. We can bring a great deal of heat out of it, or we can make it do a great deal of mechanical work.

Now as wood grows, from whence does the wood derive its energy? We are entitled to ask this just as fairly as from what source it derives its particles. The wood, we answer, derives its energy from the sun's rays. Part of these rays is spent in decomposing carbonic acid in the leaves of plants, ejecting the oxygen (one of the products of this decomposition) into the air, but retaining the carbon in the leaf, and ultimately building up the woody fibre from this very carbon.

Nothing for nothing in these regions. The sun's energy is spent in producing the wood or coal, and the energy of the wood or coal is spent (far from economically, it is to be regretted) in warming our houses and in driving our engines.

These two illustrations will tend to impress upon the minds of our readers the truth of the grand principle of the conservation of energy.

The principle now described has reference, however, merely to quantity, and asserts that in all the various transmutations of energy there is no such thing as creation or annihilation. An additional principle discovered by Sir W. Thompson, and named by him the "dissipation of energy," refers to quality. And here also there is a striking analogy between the social and the physical world; for as in the social world there are forms of energy conduced to no useful result, so likewise in the physical world there are degraded forms of energy from which we can derive no benefit. And as in the social world a man may degrade his energy, so also in the physical world may energy be degraded; in both worlds, when degradation is once accomplished, a complete recovery would appear to be impossible, unless energy of a superior form be communicated from without.

The best representative of superior energy is mechanical effect. Another is heat of high temperature, or the means of producing this in the shape of fuel.

The mechanical energy of a machine in motion may not only give us useful work, but, if we choose, we can trans-

* We ought not to omit the names of W. R. Grove and Mayer in connection with this generalization.

mute it either directly or indirectly into all other forms of energy. Again, high-temperature heat is another very useful form of energy, and by means of the steam-engine it may be converted into mechanical effect. On the other hand, when heat is equally diffused or spread about, it represents the most degraded and worthless of all forms of energy. Nothing of value can be accomplished by its means. Thus, for instance, there is abundance of heat spread throughout the walls of the chamber in which we now write, but not a particle of all this can be converted into useful mechanical effect.

Long before any of these laws were known, the superiority of certain kinds of energy was instinctively recognized ; and desperate, but of course futile, efforts have ever and anon been made by enthusiastic visionaries to procure a perpetual motion or an ever-burning light. We could amuse our readers, if we had time, with some of these : the lesson they teach is, that no ingenuity can raise a superstructure without foundations. The possibility of a perpetual motion still lingers in the minds of certain enthusiasts, but the idea of an ever-burning light has vanished long since ; it seems more than the other to have been associated with pretensions to magic. Thus, in "The Lay of the Last Minstrel," we find the monk of St. Mary's Aisle describing in the following words the grave of the famous wizard Michael Scott :—

"Lo, warrior ! now the cross of red
Points to the grave of the mighty dead ;
Within it burns a wondrous light,
To chase the spirits that love the night.
That lamp shall burn unquenchably,
Until the eternal doom shall be."

Now the law of the dissipation of energy shows us at once why a perpetual motion and an ever-burning light are both equally impossible. It asserts that there is a tendency in the universe to change the superior kinds of energy into inferior or degraded kinds, which latter can only to a very small extent be changed back again into superior forms. Thus we have seen how easy it is by percussion or friction to transmute all the mechanical energy of a blow or visible motion into heat, but only a very small portion of this heat can be trans-

muted back into visible motion. There is, in fact, a tendency abroad to change all kinds of energy into low-temperature heat equally spread about,—a thing that is of no possible use to any one.

Seeing, then, that our existence and well-being depend on the presence in the universe of a large quantity of superior energy, which we may be able to utilize, it becomes us to look about us, and take stock as it were of the goods that have been placed at our disposal. Now the nearest approach to an ever-burning lamp is the sun, and a near approach to a perpetual motion is represented by the motion of the earth on its axis, and it will shortly appear that it is from these two sources of superior energy that we draw all our supplies of this indispensable commodity.

Of the two sources the sun is by far the most important. Let us examine very briefly the extent of our obligations to our great luminary. In the first place, without his energy in the shape of heat and light everything in the world would be frozen and dark ; for the little heat left, being unrecruited, would very soon pass off into space, and our scanty stock of fuel would form a very poor substitute for the sun's rays. But this is only a small part of what we get from the sun, for we have already hinted that it is by means of the energy of his rays as absorbed by the leaves of plants that carbonic acid is decomposed, and coal and wood produced, coal being a product of the past and wood of the present age.

Food has the same origin as fuel ; it is in fact the fuel which we burn in our own bodies instead of on our hearths or in our engines. Without a proper supply of food we should soon cease firstly to perform work, and ultimately to live, and the more hard work we have to accomplish the more food must be taken.

In like manner, without a proper supply of fuel a steam-engine would soon cease to perform work. Again, wind and water power, or the power of air and water in motion, ought not to be forgotten as forms of energy which may be usefully applied. These also are indirectly due to our luminary, whose heat produces currents in the atmosphere, and also carries up in the form of vapor the waters of the ocean

to be again precipitated in the form of rain. Windmills and watermills are therefore due to the sun as well as steam-power and muscular energy. Tidal energy stands, however, on another footing. The tides are produced by the action of the moon and of the sun upon the waters of the ocean, but the energy which they represent is not derived from these luminaries, but from the rotative energy of our own globe, which is gradually losing its speed of rotation from this cause, although at a rate which is extremely small, indeed almost infinitesimal.

Is it then the case that we have been furnished on a grand scale with that which enthusiasts have in vain tried to imitate on a small one, namely,—an ever-burning light and a perpetual motion?

If we allow that myriads of years bear nearer approach to eternity than a few hours, then we may assert that this is the case; but if we regard all duration and all magnitude as comparative, then we have only been furnished on a large scale, as regards both these elements, with what we can ourselves produce on a small one.

The principle of degradation is at work throughout the universe, not less surely, but only more slowly, than when it combats our puny efforts, and it will ultimately render, it may be, the whole universe, but more assuredly that portion of it with which we are connected, unfit for the habitation of beings like ourselves. As far as we are able to judge, the life of the universe will come to an end not less certainly, but only more slowly, than the life of him who pens these lines or of those who read them.

It is desirable to state clearly, and once for all, that our stand-point in what follows is that of students of physical science. We are here only as such students, and, from the trifling elevation which we may have reached as followers of science, we shall endeavor to answer, it may be imperfectly, but yet honestly, certain questions which might be put to us by those who are interested in knowing "how the day goes."

More particularly, then, with regard to the place of life,—What are the conditions necessary in order that the universe may be a fit abode for living beings?

It has already been shown that one of these conditions is the existence in the universe of a quantity of energy, not in a thoroughly degraded state, but capable of producing useful effect; we have now to add that *another condition is the capability of great delicacy of organization.*

The motions of the universe would seem to be of two kinds; it is in fact the old story of a shield with two sides, each side with its champion, and the quarrel between them very hot. If we reflect we shall see that the perfection of the laws which regulate the larger masses of the universe, such as planets, consists in the fact that the motions produced are eminently capable of being made the subject of calculation. But, on the otherhand, the very perfection of the animated beings of the universe consists in the fact that their motions cannot possibly be made the subject of calculation. A man who could predict his own motion is an inconceivable monster; in fact, having calculated what he is about to do, he has only to do the opposite in order to show the absurdity of the hypothesis.

This freedom which is given to animated beings is nevertheless held quite in conformity with, and in subjection to, the laws of energy already mentioned, but it requires as a condition of its existence *great delicacy of organization.*

In order to comprehend what is meant by this expression, we may imagine to ourselves a universe consisting of nothing but carbon and oxygen separate from one another. Such a universe would possess to a very large extent a superior kind of energy, yet we cannot by any possibility imagine how such materials could be moulded into organized forms or become the residence of living beings. The very idea of its sable monsters provokes a smile, although we might perhaps be at a loss were we asked definitely to state our objection to this condition of things.

Let us, however, consider this imaginary universe for a moment, and the nature of its deficiency will soon appear. If on fire, it will continue to burn at a rate which may be calculated without much trouble; if not on fire, it will continue as it is. There is not, therefore, in such a universe any, or hardly

any, capacity for producing or sustaining delicate organizations possessing freedom of motion.

A living being (at least one of a superior order) is not only a machine capable of producing motion, but of producing it discontinuously, and in a great variety of ways which cannot be calculated upon except to a very limited extent.

In this respect there is a class of machines analogous to some extent to living bodies. Suppose, for instance, a gun loaded with powder and ball, and very delicately poised, then by the expenditure of a very small amount of energy upon the trigger a stupendous mechanical result may be achieved, which may be greatly varied; touch the trigger, and the gun is discharged, driving out the ball with great velocity. The direction of its path will, however, depend upon the pointing of the gun; if well pointed, it may explode a magazine, — may, even, win an empire.

Here then there is a very stupendous result in the way of visible motion produced through the agency of a very small amount of energy bestowed upon the trigger, and all in conformity with the conservation of energy, since it is a certain kind of energy of position resident in the gunpowder that has been changed into mechanical effect; but yet the result cannot be achieved without the application of this small amount of directive energy to the trigger, for if the trigger be touched too lightly the gun will not go off. The small amount of energy bestowed upon the trigger becomes, as it were, the parent or source of the much larger amount of energy of the cannon-ball. We have in fact here a machine of *great* though *finite* delicacy of construction.

It is not, however, impossible to suppose a machine of *infinite delicacy of construction*. We may, for instance, imagine an electric arrangement so delicate that by an amount of directive energy less than any assignable quantity a current may be made to start suddenly, cross the Atlantic, and (as far as physical results are concerned) explode a magazine on the other side. Indeed, the forces of nature appear to be such that an infinite delicacy of construction is not inconceivable.

We have thus considered two cases

of machines having great delicacy of construction. In the former of these it required a certain finite and definite amount of energy to be expended on the trigger before the gun was discharged, but in the second case things were brought to such a pass that by an application of an amount of energy less than any assignable quantity, the electric circuit would be rendered complete. The first case in fact represents a machine of great but yet finite delicacy; the latter, a machine of infinite delicacy of construction.

Let us now proceed to state the various conceivable functions that life may be supposed to discharge with relation to the energy of the universe: we say conceivable, for in the sequel the reader will be called on to select from a list of four kinds of action, of which two, although conceivable, are yet extremely improbable. Our choice therefore must finally be restricted to two conceptions, neither of which is inconceivable or impossible as far as the laws of energy are concerned; and between these two we must finally choose on other grounds than can with propriety be treated of in this article.

There are four functions which life or intelligence may be supposed to discharge. In the first place, there is the purely materialistic view of life, which may be stated thus:

A living being is a very complicated machine, consisting of matter very delicately organized, but containing besides no other principle; so that, if we knew completely the laws of matter and the position of the various particles which constitute the machine, and if we knew at the same moment the disposition of the exterior universe which is capable of influencing the machine, and if our methods of calculation were sufficiently developed, we should be able to predict all future motions of the living being.

The second hypothesis is, that life or intelligence has the capacity for creating energy. This view is so very improbable that we may dismiss it with a very few remarks. What we can say with truth is that, in all experiments and observations which we have been able to examine thoroughly, energy is not created. It is conceivable that there

may be a region beyond our ken in which energy is created, but, arguing according to the principles which are universally admitted to be our guides in such matters, we must pronounce the creation of energy by a living being to be out of the question.*

The third conceivable hypothesis regarding the function of life is that which asserts that life, although it cannot create energy, can yet transmute *immediately, and by virtue of its presence*, a finite quantity of energy from one form to another. It is necessary to explain the meaning of the word *immediately*. Referring to the gun with a delicate trigger, which we have already alluded to, it cannot be said that the *immediate* cause of the motion of the ball was the energy bestowed upon the trigger: the immediate cause of this motion was the aërisiform state which the gunpowder had assumed, while again the immediate cause of the change of state in the gunpowder was the heat developed by the explosion of the fulminating powder in the touch-hole, and the cause of the powder's exploding was the blow given to it by the hammer of the lock. The blow again may be traced to the action of the lock-spring, which is set free to act through the small impulse communicated to the trigger. We see from this that whenever a finite amount of energy changes its form,—as for instance, when the chemical energy of the gunpowder is changed into the mechanical energy of the ball,—we naturally look to some material circumstance which precedes and explains this change. We may be quite certain that the gunpowder will not explode unless a small quantity of high-temperature heat be communicated to it, nor will the fulminating powder explode unless it receives the blow, nor will the blow be given unless the trigger is pulled.

Thus, in this example, if we are able to change some energy which we have at hand into visible energy sufficient to pull the trigger, that small change will form the original germ of the much greater one implied in the explosion of the powder and the motion of the ball, or rather it will be the first link in a

series of changes of which the last is the motion of the ball; and so in similar machines we find a change of energy preceded by some other change, perhaps much smaller in amount, which explains it. And now the question arises, Can life, while it does not create energy, be yet the *immediate* cause of the change of a finite quantity of energy from one form to another, which change would not have taken place without the presence of life, and which is not, therefore, preceded by a material cause in the shape of a parent change of energy? We cannot readily allow that life can act thus, for this would imply that of the finite and measurable changes of energy which take place in the universe, and which therefore either are, or may become, subjects of experiment and observation, some are immediately preceded by a material cause, and some by an immaterial one, and that this is the regular system of things; to the minds of most men an uncertainty of this nature in the immediate causes of measurable results will appear improbable *a priori*; and, moreover, it is a view entirely unsupported by experiment and observation. Let us, therefore, dismiss this view of the action of life, and consider the only other view of its action which appears to be possible.

Assuming, therefore, that life can neither create energy nor yet immediately transform a finite amount of energy from one form to another, may not the living being be an organization of infinite delicacy, by means of which a principle in its essence distinct from matter, by impressing upon it an infinitely small amount of directive energy, may bring about perceptible results? We have shown that such a class of machine is conceivable, when we suggested a certain electrical arrangement, and we know that our bodies are machines of exquisite delicacy. Such a mode of action of the vital principle is not, therefore, inconceivable, and, by supposing that it does not immediately change a finite quantity of energy from one form to another, we get rid of that element of irregularity which we cannot easily admit to be consistent with the order of nature. We are thus presented with two hypotheses of the action of life. The first of these is the materialistic hypothesis

* This was recognized at an early period by Carpenter and Joule.

which denies the existence of life as a principle apart from matter; while the other allows the existence of an independent principle, but assumes its action to take place through the medium of a machine of infinite delicacy, so that by a primordial impulse of less than any assignable amount a finite and visible outcome is produced. These are the two alternatives, and it is not within our province to attempt to decide between them. The battle must be fought in other pages than ours, and by other weapons than those which we can produce.

Let us here pause for a moment to consider the wonderful principle of delicacy which appears to pervade the universe of life. We see how from an exceedingly small primordial impulse great and visible results are produced. In the mysterious brain chamber of the solitary student we conceive some obscure transmutation of energy. Light is, however, thrown upon one of the laws of nature; the transcendent power of steam as a motive agent has, let us imagine, been grasped by the human mind. Presently the scene widens, and as we proceed, a solitary engine is seen to be performing, and in a laborious way converting heat into work; we proceed further and further until the prospect expands into a scene of glorious triumph, and the imperceptible streamlet of thought that rose so obscurely has swelled into a mighty river, on which all the projects of humanity are embarked.

And now a hint to those who are disposed to adopt that theory of life which demands an infinite delicacy of construction.

May it not be possible that in certain states of excitement there is action at a distance? This is a field of inquiry which men of science do not seem disposed to enter, and the consequence is that it appears to be given over to impostors. We need scarcely, after this, inform the reader that we do not believe in so-called spiritual manifestations; nevertheless we ask, does there not appear to be an amount of floating evidence for impressions derived from a distance in a way that we cannot explain? For are not the most curious and inexplicable actions of instinct those

in which distance seems to be set at naught? Then, again, if we take the element time, instead of distance:— who has not felt some past scenes perhaps of his early childhood, called up suddenly and vividly before him by some trivial sight, or sound, or smell? May there not, after all, be a deep physical meaning in these words of the poet:—

*"Yet still, from time to time, vague and forlorn,
From the soul's subterranean depth upborne,
As from an infinitely distant land
Come airs and floating echoes, and convey
A melancholy unto all our day."*

Hitherto we have been confining our thoughts to the realms of life, in which the principle of delicacy is sufficiently obvious, but the results of a preceding article will have prepared our readers for a wider application of this principle. It is not only in the organic world that we see a delicacy of construction, but in the inorganic also. Thus it will be remembered that, in discussing the molecular state of the sun, we came to the conclusion that it was one of great delicacy, so that in our luminary a very small cause might be the parent of enormous effects, of a visible and mechanical nature. And when we came to analyze the behavior of sun-spots, we found that this behavior had a manifest relation to the positions of the two planets Venus and Jupiter, although these two planets are never so near the sun as they are to our own earth. We have also shown that sun-spots or solar disturbances appear to be accompanied by disturbances of the earth's magnetism, and these again by auroral displays. Besides this, we have some reason to suppose a connection between sun-spots and the meteorology of our globe. From all these circumstances we cannot fail to remark that the different members of our system (and the thought may be extended to other systems) are more closely bound together than has been hitherto supposed. Mutual relations of a mathematical nature we were aware of before, but the connection seems to be much more intimate than this—they feel, they throb together; they are pervaded by a principle of delicacy even as we are ourselves.

We remark, in conclusion, that something of this kind might be expected if

we suppose that a Supreme Intelligence, without interfering with the ordinary laws of matter, pervades the universe, exercising a directive energy capable of comparison with that which is exercised by a living being. In both cases delicacy of construction would appear to be the thing required for an action of this nature.

Bearing in mind, however, our physical stand-point, we cannot venture to offer any further remark on this subject. Whether such a mode of action is a *fact* must be decided by other considerations; whether it would appear to be *physically possible* is a question which we may suppose put to us, and which we have ventured to answer as above.

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TWO ABDICATIONS—DIOCLETIAN AND CHARLES THE FIFTH.

"With mine own hand I give away my crown;
With mine own tongue deny my sacred state;
With mine own breath release all dueuteous oaths."

SHAKESPEARE.—"King Richard II."

THAT sovereigns in the full exercise of imperial power—the idol of their hopes and the object of their lives, freely indulged without scruples of conscience or moderation, when passion or prejudice predominates in their hearts—should voluntarily resign that power and descend into the obscurity of private life, is one of those extraordinary chapters in human history that seldom presents itself for our perusal; and when it does so, calls for profound examination and reflection.

The two most celebrated instances on record are those of Diocletian and Charles the Fifth. Not only in this particular act, but in their general characters and dealings, we recognize many features of close resemblance. We find similar results produced by similar causes, and personal ambition more uniformly carried out by policy than by violence. Remarkable exceptions there are to their usual system, in the practice of both monarchs. For instance, in the indiscriminate proscription of the Christians, as a body, by the Pagan, and in the particular persecution of the Protestants as a sect, by the Christian emperor. It appears, also, to be quite certain that of the ebullitions of intolerance, the lat-

ter was, by far, the most unrelenting and destructive. If we are to trust the authority of Grotius, more than one hundred thousand of the subjects of Charles the Fifth suffered death upon religious grounds in the Netherlands alone during his single reign, and by the hand of the executioner. This number far exceeds that of the primitive martyrs under three centuries of Roman paganism. Grotius relates the fact in his "Annals," and Gibbon refers to the relative enumeration, with the complacency that might be expected from him. Fra Paolo, in his "History of the Council of Trent," reduces the aggregate of Belgic sufferers to fifty thousand. The monk wrote first, but Grotius was a native of the country. If we place them on a par in learning and veracity, and divide the total amount of the massacred as given by each, seventy-five thousand will still leave the balance of barbarism weighing heavily against the Christian oppressor.

In our own days we have seen successful soldiers ascend thrones; Napoleon, from being a subaltern of artillery; Murat and Bernadotte, from the ranks as privates. But Diocletian rose even from a lower state. His parents were slaves in the establishment of a Roman senator, and he himself was born in thraldom. His original name, Docles, euphonized into the Grecian Diocles, and the Latin Diocletianus, was derived from a small Dalmatian town called Doolia, of which his mother was a native. His father purchased the freedom of the family, and trained his son up to the profession of arms. Diocletian, at thirty-eight, had risen to the command of the body-guards when Numerian was cut off by Aper, his father-in-law, A. D. 284, and the generals and tribunes of the army elected their favorite leader to revenge and succeed the murdered emperor.

It was said of Diocletian—by Lactantius—that he was not personally brave. Assuredly he had not the constitutional love of combat which characterized Attila, Cœur de Lion, and Charles of Sweden; but he was always found to be sufficiently valorous for the duty he had to perform. Like Augustus, who has also been charged with lack of courage, and on more conclusive evidence, he was inherently a politician rather than a warrior, an administrator in

the bureau more than a general in the field ; winning, after his elevation, many of his most important victories by his lieutenants, and not by his own personal skill or prowess. In the last named practice he was closely followed by Charles the Fifth, and both were equally judicious and fortunate in the selection of their deputies. Maximian, Galerius, and Constantius, under Diocletian, were the swords of Rome, as subsequently, under the grandson of Ferdinand and Isabella, Prosper Colonna, Pescara, Del Guasto, and Da Leyva, were the right arms of Spain and Austria.

When the Roman army of the East, on the plains of Chalcedon, elevated Diocletian, by unanimous consent, to the judgment seat, he summoned the culprit Aper to his presence. Having piously invoked the sun to witness his own solemn denial of all complicity in the murder of Numerian,—a preliminary exculpation which implies either that he had been suspected, or that he suspected himself,—he proceeded to execute justice on the assassin, with his own hand and sword, as he stood in chains before the tribunal, and without allowing him time to plead guilty or not guilty to the charge. He appears to have been as anxious to get him out of the way as Macbeth was to dispose of the two drunken and drowsy chamberlains of King Duncan, fearing, perhaps, unseasonable disclosures if he were suffered to speak ; or it might be from a superstitious remembrance of the punning prophecy made to him in his youth, that after killing a wild-boar (*Aper*), he should reach the imperial dignity. It would have been more dignified as well as more conclusive in favor of his own innocence had he consigned the criminal to the *Tristan l'Hermité* of the camp to be dealt with in the regular way, by pronouncing the usual formula, *caput obnube hujus, or Deliga ad palum*. The coup de théâtre, however, produced its full effect, for fifty thousand applauding spectators immediately hailed the amateur executioner as master of the Roman world. The sceptre thus placed in his hand he wielded for twenty-one years with combined prudence, decision, and success.

Diocletian was a man altogether artificially moulded. If he had strong passions, he seldom gave way to them, and

if inwardly disturbed, he exhibited no outward symptoms of the storm. That he was not naturally cruel or tyrannical, as generally stated by historians, seems to be contradicted by his treatment of the Christians ; but of that great persecution there is reason to believe that the more impulsive Galerius, and not Diocletian, was the immediate instigator and instrument. Diocletian signed the decree, with some hesitation, a very short time before his abdication, but left to his successors the odium of seeing it carried out.

Gibbon and other writers speak of Diocletian as “ having acquired the glory of giving to the world the first example of the resignation of sovereign power, which has not had many imitators.” Do they forget Sylla ? or do they consider that because he was not king or emperor by name, his title of perpetual dictator was less than that of absolute monarch ? If so, they argue on a distinction without a difference, and merely quibble upon words. The dictator’s act was not only an earlier instance, but one more startling and defiant, seeing that he was stained with the recent slaughter of thousands of his compatriots, that he walked fearlessly in public, without guards, on the scene of his proscriptions, and died in his bed.

Diocletian had to fight for the throne which had been foretold to him within eight months after his election. Carinus, the younger brother of Numerian, who wielded the arms and treasures of the West, determined to dispute what he had some pretence for considering his lawful inheritance. In a battle fought at Margus, on the Danube, by dint of superior numbers, he nearly obtained a victory ; but a tribune, whose wife he had seduced, seizing the opportunity of avenging private wrong, stabbed him in the heat of the contest, and left the Dalmatian adventurer without a rival. The civil war being thus concluded at a stroke, the conqueror inaugurated his reign by a universal amnesty, retaining all the great public officers in their posts, and appearing, by his general system, to prefer the service of the State to the gratification of private feelings. He declared his intention of governing on the philosophic principles of Marcus Aurelius, and after the example of that

illustrious emperor, gave himself a colleague in the person of his old friend and comrade, Maximian, on whom he bestowed, at first, the subordinate title of *Cæsar*, and afterwards elevated to his own level by that of *Augustus*.

Maximian was a rude soldier, born a peasant, utterly uneducated, and unpolished in appearance and manners. When his flatterers told him that his warlike deeds entitled him to be ranked with Hannibal and Scipio, he smiled grimly at the compliment, although he had never heard the names of those heroes before. He was as unscrupulous as active, and ever ready to assume the responsibility of harsh measures, which his more artful coadjutor might find it convenient to direct without wishing to acknowledge. Yet they continued to be warm friends even on the throne. The turbulent spirit of Maximian bowed before the genius of Diocletian, and confessed the ascendancy of mind over mere physical energy. They assumed respectively the titles of *Jovius* and *Herculius*, as emblematical of wisdom and strength; and the venal superstition of the age admitted while it applauded the distinction.

But the barbarians, who threatened the Roman empire on every side, were numerous and indefatigable. They appeared ever to increase, like the heads of the hydra, with partial extermination. A further sub-division of power became necessary, which led to the appointment of Galerius and Constantius—named *Chlorus*, from his pale complexion—to the secondary title of *Cæsars*, which placed them on the steps of the throne, and conferred the rights of succession. Galerius had been originally a herdsman, but Constantius was nobly descended. As generals, they were equal in reputation. In moral endowments, the latter was amiable and enlightened; the former, from his habitual rudeness and severity, was usually designated the younger Maximian. They became respectively sons-in-law to the two elder emperors—Galerius marrying the daughter of Diocletian, and Constantius the daughter of Maximian. The three juniors governed, each as sovereign within his own allotted district, without personal jealousy, and in acknowledged deference to their senior.

Julian, the apostate Emperor, who drew the characters of his predecessors in the Roman purple, describes this legislative harmony as resembling a chorus of music regulated and kept in tune by the master hand of the conductor. The appointments were not made all at once, but followed progressively within seven years. This division of duties was undoubtedly an able conception on the part of Diocletian, in which personal selfishness had no share. His clear judgment also was eminently displayed in the individual selection. The progress of events speedily indicated the profound sagacity of the theory and practice.

The policy of Diocletian encouraged perpetual dissensions amongst the surrounding barbarians, which removed invasion from his own territories. The subjects of Rome were thus relieved from an annual scourge, and the inhabitants of the frontier provinces tilled the land in peace and confidence, no longer dreading that the harvest would be pillaged from them by an irruption of Goths, Vandals, or Alemanni. Gaul rose in rebellion under a general insurrection of the peasants; but Maximian speedily restored obedience. Britain revolted under Carausius, and years elapsed before that important outpost was recovered by Constantius. Egypt and Africa followed the contagious example. Diocletian conducted this war in person, and brought it to a triumphant issue with his usual good fortune. Alexandria surrendered after a siege of eight months, and was visited with unrelenting rigor. Many thousands of the citizens were put to death, and few of the rebels or those suspected of disloyalty escaped without confiscation and exile. The cities of Busiris and Coptos were swept from the face of the earth so completely, that, after a few years, no vestiges could be traced of their former grandeur. There was cruelty in this severe retribution, equal to that with which Charles the Fifth, many centuries later, treated his native city of Ghent on a similar provocation. But there was both prudence and humanity in the edict published by Diocletian for the destruction of all books which treated of and encouraged the delusion of alchemy—the transmutation of coarser metals into gold and silver. The good

sense of the Emperor saw through the folly of such attempts, and the mischievous consequences of their indulgence. The books, however, were less ancient than they have sometimes been considered, and the art itself, instead of being traceable to Pythagoras, Solomon, or Hermes, was ascertained to be of comparatively recent origin.

Egypt being completely reduced, it was then considered necessary to efface the stain inflicted on the credit of Rome by the Persians, and to punish the successors of Artaxerxes for the captivity and death of Valerian. This important service was committed to Galerius, while Diocletian fixed his own head-quarters at Antioch, remote from the actual field of battle, but near enough to superintend the plan of campaign. The armies met on the plains of Mesopotamia, a locality fatal to Roman prowess, as having witnessed the defeat and death of Crassus. Three actions were fought, and in the last Galerius sustained a total overthrow, attributable entirely to his own rashness in attacking myriads with an inconsiderable force. When the discomfited lieutenant, leaving his slaughtered army where they fell, reined up his panting steed before the walls of Antioch, he was received, not as a friend and colleague, but as a disobedient satrap who had neglected or exceeded his orders. For more than a mile he was compelled to precede the Emperor's chariot on foot, still wearing the emblems of command, but publicly degraded in the eyes of the court and the people. His haughty spirit cherished the memory of that bitter hour, which some authors say he subsequently retaliated by coercing the retirement of his benefactor, and divesting it of the grace of voluntary renunciation. In the mean time, however, Galerius consoled himself by submissively entreating another trial, which, being granted, enabled him to retrieve his lost honor and the credit of the Roman arms. The Persians, commanded by their King, Narses, were routed in a great battle, leaving their camp, with its incalculable booty, at the mercy of the victors. Ammianus Marcellinus relates an incident in connection with this event, which shows that the Roman soldiers of that day were simple in their habits and ideas. A bag of

shining leather, filled with large pearls, fell into the hands of a legionary private. He kept the bag, the value of which he understood, but the contents being, in his estimation, useless, he threw them away. Similar stories have been related of the ignorance of our own soldiery, when rambling in search of curiosities through the palaces of Delhi, Lucknow, and Pekin.

The wives, sisters, and children of the Persian King were made prisoners by Galerius. He had little of Alexander in his general character, but on this occasion he imitated the generosity of the Macedonian in his treatment of the royal captives. Diocletian, who had waited the result of the campaign with an army of reserve, advanced towards the scene of action on the news of the Caesar's victory, and now folded him in his arms with paternal affection and restored confidence. The Persians sued for peace, and, in accordance with the prudent diplomacy of the Roman Emperor, were admitted to more reasonable terms than their treatment of Valerian, under a gleam of good fortune, had entitled them to expect. They abandoned Armenia and Mesopotamia, and ceded five provinces beyond the Tigris, which were incorporated with the dominions of Rome, and proved a valuable barrier on the Eastern frontier.

Diocletian had now reached the twentieth year of his reign, during which time it appears doubtful whether he ever visited the ancient capital. Nicomedia and Milan were the ordinary residences of himself and Maximian, during the short intervals when they were not engaged in distant wars. These two favored cities speedily rose into magnificence, rivalling, within a few years, Rome, Alexandria, and Antioch. Both Emperors had an evil eye towards the Senate, and disliked the licentious familiarity of the Roman populace. The dangerous Praetorians they reduced by degrees until that formidable band entirely merged into the new and more personally devoted legions of Jovians and Herculians, who succeeded as the body-guards of the monarchs they acknowledged respectively as their founders and patrons. That once proverbial arbiter of national and individual fortunes, the Roman Senate, began to be

forgotten. As Gibbon says, "losing all connection with the imperial court and the actual constitution, it was left a venerable but useless monument of antiquity on the Capitoline hill." To abolish finally all resemblance to the old republic, Diocletian assumed the diadem, and introduced the cumbrous ceremonial of Persia, with its silken and embroidered robes, to supersede the toga and paludamentum, the civil and military habiliment of the patrician and general. Prostration of the person was universally enjoined, without reference to the rank of the subject, whenever he was permitted to address his lord and master. Diocletian had too much common sense to believe himself a god, even according to pagan notions of divinity; but he thought, with the grand Lama of Thibet, that difficulty of approach would surround him with a sacred halo, and that servility might lead to veneration. His system of multiplying the supreme authority by increasing the number of administrators facilitated the course of justice, and strengthened the hands of power, but it added grievously to the burdens of the people. Of the four rulers he was the only one who lived within his enormous income. He was not positively frugal or sparing of public money, but merely so in a comparative sense, as being less wasteful than his partners. An imperial or royal establishment, in any country, must be supplied by a large annual outlay. When such a system is quadrupled, and not regulated with economy, the disadvantages will outweigh the gain, and the inevitable increase of taxation must as inevitably lead to popular suffering, complaint, and revolution.

On the 20th of November, A.D. 303, the eyes of the Roman people were greeted, for the last time, with a spectacle long familiar to their fathers, and associated with the brightest periods of their republican history. Diocletian, accompanied by Maximian, paraded through the streets of the metropolis the glories of a Triumph, less splendid in outward show than those of Aurelian and Probus, but more solid in the trophies displayed and the conquests commemorated. Representations of the provinces won from Persia were carried before the imperial car. The family of

the great king having been restored to him, were unable to figure in person, as Zenobia of Palmyra had been compelled to play her part, fainting under the weight of jewels and golden chains. But they appeared in effigy, and the images were rapturously applauded by the surrounding thousands. Galerius and Constantius were not permitted to take any share in this august celebration to which their swords and services had contributed the most important features. According to the maxims of antiquity, their most brilliant achievements were considered as nothing more than reflections of the auspicious influence of their fathers and emperors. At this triumphal visit Diocletian limited his stay in Rome to two months, and never returned again. It was expected that he would present himself in the Senate, invested with the symbols of consular dignity, but he had no taste for the display, and felt little disposed to gratify the curiosity or vanity of a people he so thoroughly despised. He evaded the infliction by a precipitate retreat, thirteen days before the appointed time. Within one year after this public exhibition of despotic rule and military renown, the proud votary of ambition, the successful soldier, who, not contented with the title of emperor, had scandalized the lingering remains of Roman prejudice by assuming also that of Dominus, or Lord, startled the obedient world over which he ruled, by a voluntary abdication of the power that seemed interwoven with his existence as a necessary portion of breath and being. The wayward emotions of man's heart are unfathomable; but never, in man's estimation, did there appear a sovereign less likely to descend from his throne by free choice than Diocletian; unless, perhaps, we except his most illustrious imitator, Charles the Fifth.

Whether Diocletian was really influenced by declining health, advancing age, the anticipation of coming troubles, or the coercive menaces of his son-in-law, Galerius, historians are divided in opinion and posterity can never decide. But the act, the manner of its execution, and the alleged motives are on record with as much minuteness as the most sceptical inquirer can desire. Diocletian had met with no reverse to impress on him the

uncertainty of fortune's favors. He was only fifty-nine, eleven years younger than Galba, Pertinax, and Tacitus, when they were respectively raised to the throne. But climate, service, and unremitting application to business had done more than their ordinary work upon him, and brought on the infirmities of a premature decline. The latter years of Charles the Fifth's reign were checkered by defeat and disappointment. Here the parallel fails, for Diocletian had no ebb in the ever-flowing tide of his prosperity.

During the winter which succeeded his Roman triumph, he was entirely confined within the palace of Nicomedia by a dangerous illness, and a rumor of his death became so prevalent that the fact was supposed to be concealed only from the apprehension that troubles might arise in the absence of the Cæsar, Galerius. When Diocletian once more appeared in public, it was evident, from his emaciated appearance, that the administration of a great empire had passed beyond his powers. The 1st of May, A.D. 304, witnessed the ceremony of his retirement. The scene was a spacious plain about three miles from the city of Nicomedia. Diocletian ascended a lofty throne erected for the purpose, from whence he harangued the people and the soldiers in an elaborate discourse. He spoke of his services to the state, of his declining health, of the merits of his successors, and of his anxiety for the future happiness of the people. All this is carefully set down in the pages of the annalists, though, in all probability, as little of what is preserved was heard by the surrounding multitude as was uttered by the imperial orator. The set speeches put into the mouths of kings and leaders of armies by the historians of old are not more to be depended on than the parliamentary harangues so eloquently reported in Cave's Magazine and *written* by Dr. Johnson (as he himself said) in a garret in Exeter street. The great Condé, in conversation with Cardinal de Retz on the inventive faculties of biographers and the like, observed with more truth than reverence—"These fellows make us speak and act precisely as they would have spoken and acted in our places."

Diocletian having gone through his

part, divested himself of the imperial robe and tiara, descended from the tribunal, entered a covered chariot, and, traversing the city, proceeded at once to the retreat he had selected in his native country of Dalmatia, and where a sumptuous palace had long been in preparation. The ruins still existing in the neighborhood of Salona, now Spalatro, attest the size and magnificence of the structure when complete. However resolved the future inmate might be to resign imperial power, he had no intention of giving up the pomps and vanities of the world, or to deprive himself of a single indulgence which health might require or luxury could contrive. The building was so extensive, and occupied so much time in construction, that the scheme of abdication must have been maturing in the mind of the ex-emperor for years before he carried it into effect. This surely furnishes a strong argument against the assertion that he was constrained in his ultimate decision.

Diocletian, by a previous arrangement with Maximian, had bound him under a solemn oath, sworn before the altar of the Capitoline Jupiter, to retire when he did. He now called upon his colleague to execute his part of the contract, and by his usual ascendancy exacted a most unwilling compliance. Herculius would most probably have reconciled his conscience to a breach of the oath, had the moral influence of a superior mind been less compulsive. He was a genuine disciple of Epicurus, who valued present enjoyment far beyond future reputation; but he submitted with an impotent growl, and, speedily growing weary of seclusion, endeavored to tempt Diocletian once more into the world of political turmoil. The answer was worthy of a recluse acting the philosopher: "If you could see the cabbages I have planted with my own hands at Salona, you would never again ask me to relinquish tranquil happiness for the pursuit of power." In this reply, and in his conduct towards Maximian, we have another strong corroborative evidence that Diocletian was a free agent in the most memorable action of his life.

No place could have been selected more favorable to peaceable enjoyment in the evening of existence than the

neighborhood of Salona. The views from the palace combined all that could charm the eye; the soil and climate were not affected by the sultry winds to which many parts of the Italian and Dalmatian coasts are exposed; the sea, studded with islands, which give it the appearance of a lake, formed the foreground, and lofty mountains, on the northern side, diversified the view at a sufficient distance, presenting, in scattered abundance, well-peopled villages, woods, and vineyards. The palace, quadrangular in form, flanked with sixteen towers, covered an extent of ground reaching nearly to ten English acres. The whole was constructed of a beautiful freestone, extracted from the adjoining quarries, and very little inferior to marble itself. The principal entrance still remains, and bears its original name of the Golden Gate; but it now opens into the market-place of the modern town or village of Spalatro. The halls, corridors, and dwelling apartments were large and commodious, but they had neither windows nor chimneys. The entire edifice being of one story, it was lighted from the top, and heat was communicated in winter by pipes running along the walls. A portico of five hundred and twenty feet in length, which from description must have borne some similarity to the double colonnade that leads up to St. Peter's at Rome, carried the visitor through a noble and delightful avenue, to the centre of the building. Still, with all these tokens of vast conception and unlimited expenditure, there are evidences in the mouldering ruins that the purest styles of classical architecture had declined in the age of Diocletian, with the gradual sinking of Roman greatness. The vigor of the Illyrian princes infused physical strength, for a time, into the decaying members of their empire, and restored them from tottering decrepitude to manly vigor; but art and learning had languished and declined beyond the efficacy of any reviving panaceas at their command. Diocletian had been eminently and exclusively a man of business, but he appears to have had neither time nor inclination for science or speculative theories. Poetry and history were mute under his rule, and the sublime endowment of Cicero, the gift of oratory, was

confined to a few hired adulators who could discover no themes of inspiration beyond the praises of their imperial paymaster.

From the extent of Diocletian's preparations, and the enormous establishment he organized for the convenience, or, to speak more correctly, for the luxurious enjoyment of his privacy, we may infer that he looked forward to a long tenure of the grandeur without care which he had planned for his old age. His health recovered rapidly, and for nine years he appears to have enjoyed as much repose as the remembrances of his active manhood, and the internal troubles of the empire would be likely to permit. Of what we understand by the term domestic felicity, he could have experienced but a small allowance. He was estranged from all society with his wife and daughter, whose misfortunes must have deeply wounded his pride, even if they failed to affect his sympathy or tenderness. Although neither devoted to letters nor religion, the two leading resources of solitary life, he retained or acquired a taste for such natural pleasures as building, planting, and gardening. We do not read of any learned or philosophical symposia at which he harangued with the wisdom of a sage; but he occasionally uttered political truisms which have been carefully recorded. He spoke much of the difficulties of governing, of the arts by which princes are sold to corrupt ministers, and of the impossibility of their ever hearing the truth. He died A. D. 313, at the age of sixty-eight. Doubts have been raised as to the exact mode of his final exit. Some historians have said that, dreading the encroaching insults of Licinius and Constantius, he withdrew from their power by suicide. Others, that the Roman Senate condemned him as a criminal, and that he died raving mad. Lactantius saddles him with the latter calamity as a judgment for his Christian massacres. But the real fact would seem to be that he passed away quietly in his bed.

The character of Diocletian has been elaborately drawn by panegyrists and censurers; by Vopiscus, Eutropius, the two Victors, Eumenius the rhetorician, and Lactantius. In more modern times, Tillemont, Gibbon, and, very recently,

Dr. Doran, have condensed the substance of what had been written by the earlier chroniclers, with so much perspicuity that we have before us a clearly defined portrait of the great Dalmatian. Sagacity was the leading feature of his mind; a just appreciation of men, as he found them, the most effective implement of his policy. He was consistent and persevering rather than original in design or bold in execution. More skilled in drawing advantage from opportunities when they presented themselves in the natural course of events, than by turning aside the ordinary current by the inspiration of genius, to create a favoring crisis. He had little of the hero in his composition, taking the word in its romantic sense; but he was undoubtedly a most able monarch, although strict justice can scarcely include him in the still more exalted list of really great men. His ability is well proved by the fact that the balance of power he had established between the different rulers of the Roman empire, subsisted no longer than while it was regulated by the firm and dexterous hand of the founder. The abdication of Diocletian and Maximian was followed by eighteen years of discord and confusion, including five civil wars, and a succession of armed truces between the rival monarchs, rather than any interval of secured or lasting peace. Constantine finally triumphed over all his competitors, and re-united the Roman world under the authority of one emperor, eleven years after the death of Diocletian, and thirty-one subsequent to his first division of power and territory with his associate Maximian. Constantinople was then founded, and Christianity became the established religion of the empire. Diocletian had scarcely reposed one year at Salona, when his old partner broke out from his compulsory retirement. He attempted to conceal his reviving ambition under the disguise of paternal interest for his son Maxentius, whom he sought to elevate to the throne, unjustly usurped, as he decided, by Severus. Three stormy years terminated his restless life, his own hand superseding that of the executioner; a fate he might have avoided had the moderate counsels of Diocletian been still at hand to exercise on him their wonted ascendancy.

It was not entirely by choice that Diocletian lived alone in his retirement at Salona. His only child, Valeria, married the Cæsar, Galerius; and her mother, Prisca, attached herself to the fortunes of her daughter. Galerius died two years before his father-in-law, and soon after he had himself enjoyed the title of Augustus. Maximian, his nephew, sought Valeria in marriage; she was rich and still beautiful, but indignantly refused the offer of a sensual tyrant, and with her mother suffered bitter persecution and banishment in consequence. Diocletian in vain entreated that they might be permitted to return to him. He had ceased to be an emperor *de facto*, and could only supplicate without the power to threaten or punish. Maximian rejected the prayer, but he fell shortly after in the contest with Licinius, and the succeeding tyrant treated the two empresses with increased severity. After wandering under proscription for fifteen months, in plebeian disguises, they were discovered at Thessalonica, beheaded on the instant, and their bodies thrown into the sea. But Diocletian had gone to his account before the last calamity fell on his wife and daughter.

Let us now turn to Charles of Austria, and inquire to what extent his life, actions, and character afford points of parallel with the Dalmatian Emperor. Far from being born in a subordinate state and rising by personal energy, he succeeded to the reversionary throne of Spain and the Netherlands before he had completed his sixteenth year, and three years later was elected Emperor of Germany, to the exclusion of his then more celebrated competitor, Francis the First of France. The conquests of Cortez and Pizarro added Mexico and Peru to his widely-extended territories, and had he accepted the hand of Mary Tudor, offered to him when he became a widower, he might have added England to the list. As it was, either by marriage treaties or conquests, Spain, under his reign, realized the magnificent vaunt that the sun never set within the borders of his dominions. The boast has long passed from the descendants and successors of Charles, and is now revived in the empire of Queen Victoria.

Charles, like Diocletian, soon learned to subdue his natural impulses, and to envelop himself in a pall of hypocrisy which rendered his real character a problem and a mystery. In his early career he was as great an enigma as Napoleon III. in our own generation. That he aspired to universal dominion is apparent to modern inquiry, although his affected moderation succeeded in blinding his contemporaries. Until he reached the age of thirty, his abilities and ambition were equally undervalued. In that epoch, Europe saw ruling together five sovereigns of unusual brilliancy—Solyman the Magnificent, Pope Leo X., Francis I. of France, Henry VIII., and Charles of Spain and Germany. To the three latter were accorded reigns and lives of nearly similar duration. Francis, born in 1494, died, aged fifty-three, in 1547, having reigned thirty-three years. Henry, born in 1491, died, aged fifty-five, in 1546, after a reign of thirty-eight years. Charles V., born in 1500, died, aged fifty-eight, in 1558. He expired politically with his abdication, two years earlier, in 1556, at which time he had been King of Spain and the Netherlands forty years, and Emperor of Germany thirty-seven. The early part of the sixteenth century was still an age of chivalry and romantic daring; kings deported themselves in battle like errant-knights of fable, and sought the praise of personal valor even more than the renown of skilful leaders. Francis of Valois fought at Marignan and Pavia as if he coveted the glory of being the first man at arms in his host. Charles delighted in war, but personally shunned the dangers of the field. He was celebrated for his skill in horsemanship, and the dexterity with which he handled lance and sword. But during all the buoyant period of youth and early manhood he confined his exhibitions of personal prowess to the mimic lists of the tournament. He planned vast schemes of ambition and sovereignty, but left their execution to his generals. While Bourbon and Pescara broke the power of France at Pavia, and led her monarch to his feet, a chained captive, Charles remained a passive spectator of their great deeds in his gloomy palace at Madrid. It was not

until he had reached the maturity of thirty-two that the sovereign who had carried on such extensive wars, and gained so many victories by deputy, took the field in person and appeared at the head of his troops.

In 1532 the Turkish Sultan Solyman invaded Hungary with a horde of 300,000 fanatical followers, inflamed with the belief that it was their mission to plant the crescent on the western capitals of Europe. Catholic Germany assembled one of the best appointed and most numerous armies that had for ages taken the field under the banner of the cross. Charles V. assumed the command. He was a great king, though an untried general, and the world looked on with anxious suspense, expecting a decisive result. But each antagonist, dreading the power and good fortune of his rival, abstained from venturing the first blow, and under these restraining circumstances the campaign "dragged its slow length along," and finally subsided without any memorable event. Solyman, finding it impossible to surprise an enemy ever on his guard, marched back to Constantinople, and Charles obtained the credit of compelling him to retreat without risking the chances of battle. Better would it have been for the cause of Christendom if he had then and there eschewed personal jealousies, forgotten his ambition, and united with France and England to drive the Turks from Europe. With the combined forces of three powerful kingdoms they might have anticipated the great victory under the walls of Vienna, which a century and a half later immortalized the name of John Sobieski.

In 1535 Charles crossed into Africa, and hazarded his name and reputation in an enterprise which fixed for the moment the attention of Europe, and inspired his many enemies with the hope of a signal failure. He undertook single-handed to wrest Tunis from the usurpation of the pirate Hayradin, better known by the name of Barbarossa. Muley Haseeu, the exiled king, implored his aid, which was freely accorded. The Emperor, flushed with his successful *début* as a general in the campaign of Hungary, determined once more to command in person. Andrew Doria, the most experienced admiral of the

age, superintended the fleet, and the veterans of the French wars comprised the chosen troops of the army, directed, under their sovereign, by the Marquess del Guasto. The Tunisian expedition more than answered the expectations of Charles's admirers, and bitterly disappointed his detractors and secret foes. It proved to be one uninterrupted blaze of triumph, occupying less than a month. The storming of Goletta, and a single engagement in the field, in which the Moors were totally routed, opened the gates of the capital, which surrendered at discretion. It was found impossible to restrain the fury of the soldiers, intent on plunder and destruction; indeed, it does not appear that any vigorous efforts were made with that object. Thirty thousand of the inhabitants perished, and ten thousand more were carried away as slaves. Mulay Hascen resumed a blood-stained throne, an object of abhorrence to his subjects, and of pity even to his confederates and allies. Charles returned to Europe with twenty thousand liberated captives, all of whom he clothed and supplied with travelling expenses to enable them to reach their respective countries, where they proclaimed his beneficence with grateful hearts and exaggerated admiration. He had now reached the pinnacle of fame, while his rival, Francis, who had never recovered the misfortune of Pavia, appeared to be entirely surrendered to enervating debauchery, the influence of his mistresses, and the sway of his luxurious passions.

The personal animosity between the two monarchs had long before this time culminated to the point of a challenge to mortal combat from Francis, with a single witness on each side. This defiance, Charles, to the surprise of all the world, accepted, named the place of meeting, on the frontiers of Navarre, and appointed Baldasar Castiglione, author of the celebrated treatise called "The Courtier," to be his second. Francis then "backed out," and after a most unseemly display of scurrility and bravado on both sides, more becoming tavern roasters than mighty monarchs or errant knights, the affair was postponed *sine die*. Francis had given such proofs of personal bravery, and in all physical re-

spects was so much more than a match for his opponent, that the refusal to fight a duel might more naturally have been expected from the other quarter. The French King lost name and caste as a "preux chevalier" after this eventless episode. Men shrugged their shoulders, and whispered their surmises. Certain it is that the gallant Valois, the hero of Marignan and Pavia, never after the last-named fatal overthrow drew his sword in personal conflict. Either his nerves were shaken, or the fight was thoroughly taken out of him by repletion, as Harry the smith candidly admitted to be his own case after the battle of the Inch, of which he was almost the only survivor. At Cerisoles Francis committed his army to his young kinsman, the Count D'Enguien, instead of leading it himself. But nineteen years had elapsed since Pavia, and his constitution was broken down by excesses. From a "come on" officer he had degenerated into a "go on" one. "Go," said he to Montluc, who demanded permission to engage on the part of D'Enguien; "Return to Piedmont and fight in the name of God!" The subsequent victory, and with little loss, retrieved the glory of the French arms, which had been obscured by an apparently interminable eclipse. In political consequence the battle was a nullity.

During the year following the capture of Tunis, the disputes between Charles and Francis revived, after a short slumber, with increased animosity and mutual invectives. The Emperor, this time, entirely lost his self-command and threw off his habitual cloak of moderation. At a public reception of the French ambassadors, he delivered the following intemperate harangue, speaking, however, in Spanish, of which they scarcely understood one word in three. "Let us not continue," he exclaimed, "to shed wantonly the blood of our innocent subjects; let us decide the quarrel, man to man, with what arms the King of France pleases to choose—in our shirts, on an island, a bridge, or aboard a galley moored in a river. Let the Duchy of Burgundy be put in deposit on his part, and that of Milan on mine. Let these be the prize of the conqueror; and after that, let the united powers of Germany, Spain, and France be employed to hum-

ble the power of the Turk, and to extirpate heresy out of Christendom. But if he, by declining this method of terminating our differences, renders war inevitable, nothing shall divert me from prosecuting it to such an extremity as shall reduce one of us to be the poorest gentleman in his own dominions. Nor do I fear that it will be on me this misfortune shall fall. I enter upon action with the fairest prospect of success. The justice of my cause, the union of my subjects, the number and valor of my troops, the experience and fidelity of my generals—all combine to insure it. Of these advantages the King of France is destitute; and were my resources no more certain, and my hopes of victory no better founded than his, I would instantly throw myself at his feet, and with folded arms and a rope about my neck implore his mercy.”*

This ebullition reads with an imposing flourish in print, and might pass for a respectable illustration of history, were it not equally violent and insincere. Charles knew, from preceding events, that his challenge might be hazarded without risk. The bitterness of the accompanying invective injured his character for prudence, and lowered him in the estimation of all thinking men. But the Emperor was at that moment inflated with vanity. He had foiled Solyman and dethroned Barbarossa. Poets and astrologers combined in eulogizing his present success, and in predicting his increased greatness still in store. But a night’s repose in some degree restored his equanimity, and on the following day he made a sort of qualified apology, retracting his mortal defiance, and softening down his vituperative expressions, after the fashion of modern orators in our own House of Commons, until sheer abuse is explained away into the semblance of compliment. Nevertheless he was bent on war, and after the usual professions of peace and good-will, invaded Provence with an overwhelming army. Francis yielded for the moment to the storm, committing his forces to the command of the celebrated Constable, Annas de Montmorency. The plan of defence was similar to that which we have seen adopted with

so much success in our own days by the Duke of Wellington in Portugal, in 1810, and by the Russians when Napoleon’s invading legions crossed the Niemen, in 1812. It was the more remarkable, too, as being contrary to the natural character of the French King and the fiery genius of his nation. Montmorency retired as the Imperialists advanced, refusing battle or even a skirmish, unless with the odds greatly in favor of success, and laying waste the country, so as to deprive the enemy of all means of subsistence—in fact, sacrificing a province to save the kingdom. Del Guasto and Da Leyva, who remembered the failure of Bourbon and Pescara in a similar enterprise, implored their master not to risk his good fortune in a desperate undertaking, but he was blinded for the moment by superstitious presumption, despised the abilities of Francis, and trusted, as Napoleon did, to his star, which, until then, had never failed him.

The results proved that his generals were right. Da Leyva fell, half of the Imperial armament perished by disease or famine, and the survivors retreated precipitately, without being vigorously followed. Habitual caution had made Montmorency timid, and induced him to practise while he repeated his two favorite maxims (often and erroneously attributed to others), that it was wiser to allow a lion to escape than to drive him to despair; and that a bridge of gold should be made for a retreating enemy. The Duke of Wellington was no profound student of history. We believe his mighty genius for war to have been intuitive—a gift rather than an acquirement. It is, however, quite possible that he may have read and remembered the issue of the Emperor Charles’s invasion of France, with the plan upon which it was counteracted. There is, at the same time, no reason whatever to suppose that it ever occurred either to the individual or collective wisdom of the British Cabinet of 1810, or that they would have profited by it if it had.

It is difficult to gather from the testimony of historians whether Charles was more astonished or mortified at his failure. At all events, his faith in astrology was shaken, and he began to think that even *his* fortunes were not

* Robertson, from Bellay and Sandoval.

exempt from vicissitude. Such was his chagrin that he could not endure to pass through his Italian dominions after this signal defeat, but sailed directly from Genoa for Spain. Peace was concluded at Nice in 1538, and after twenty years of bitter hatred, the two monarchs exchanged many extravagant compliments in a personal interview at Aigues-Mortes, on the coast of Provence—where Charles had been compelled to land by stress of weather. It was a strange meeting between two rivals who had given each other the lie in foul language; who had exchanged mortal defiance, accompanied by accusations of dishonesty and murder. Francis openly charged the Emperor with being accessory to the death of his eldest son, the Dauphin, and a few months after pressed him in his arms with the assumed frankness of a gallant gentleman towards a confiding friend. How is it possible to collect the real characters of kings, either from the public occurrences of their lives, or from the pages in which their acts are recorded? It must have been some such conviction that induced Sir Robert Walpole to say to his sons, “Read anything but history, for that is sure to be false.”

A greater misfortune than the issue of the invasion of France was now impending over Charles, and one which, as in the earlier instance, he courted through his own overweening ambition and obstinacy, in the face of earnest remonstrances. He determined to conquer Algiers as he had reduced Tunis; and although the army and fleet assembled were equal to the enterprise, the season was too late, and the autumnal storms, which he omitted to take into calculation, assisted the enemy beyond even the estimate of the experienced Doria, who vainly cautioned his master against encountering their power. On the second day after the landing of the army, an almost unprecedented hurricane drove the whole fleet from their anchors, with the loss of fifteen ships of war, one hundred and forty transports, and eight thousand men; while those who escaped the fury of the waves were murdered without mercy by the Arabs as they swam to land. By this calamity Charles lost all his stores, and being in an enemy’s country without supplies, nothing remained but to march the remains of

his shattered forces to Cape Metafuz, where Doria had collected the relics of the fleet, and prepared to receive his master. The march occupied only three days, but it was undertaken by a dispirited host, entirely destitute of provisions, harassed by clouds of enemies on every side, and so exhausted that they were scarcely able to bear the weight of their arms. During this trial Charles evinced rare courage and constancy, both mental and physical. He endured hardships with the meanest soldier, exposed his person wherever danger threatened, and was amongst the last who left the shore. He thus, in some degree, sustained his reputation, and counterbalanced the presumptuous obstinacy which had impelled him into such a predicament. No sooner had the doomed armament re-embarked than a fresh storm sprang up, which entirely scattered the ships and compelled them to make towards such ports of Spain and Italy as they were enabled to reach. The Emperor himself, after miraculous escapes, was driven into the roadstead of Bugia, in Africa, where continued tempests detained him for several weeks, until he finally relanded in Spain with a few personal attendants, and only a small remnant of the twenty-six thousand gallant soldiers who had attended his departure, with all the pride and pomp of war, and the most inflated expectations of conquest.

The treaties of peace so frequently concluded between Charles and Francis, always announced in the preamble as intended to be perpetual, but as constantly eventuating in short truces, could never be expected to last beyond convenience on either side. Both monarchs were insincere, hypocritical, and unrelenting in personal dislike, however it might suit their policy for the moment to disguise their real feelings under hollow compliments. Charles was more constitutionally deceptive, and though Francis had certainly repudiated the treaty of Madrid, the humiliating terms of which were forced on him when a captive, there was no dereliction of faith in that evasion which drew on him the lasting discredit attached to the character of the Emperor for refusing to fulfil his engagements relative to the restoration of the Duchy of Milan, in 1540, and for solemnly denying that he

had ever bound himself by such a promise.

This act of palpable double-dealing, supported by a direct falsehood, may be considered the most disreputable incident in the life of a man little scrupulous of veracity and honor from internal conviction, but generally careful to maintain a fair reputation with the world, and sensitive as to the value of public opinion. The Chapter of Accidents having signally humiliated the Emperor by the result of his great Algerine expedition, never afterwards made him amends by any brilliant return of favor. The victory of Mulhausen, and the captivity of the Elector of Saxony, were gleams of sunshine more than obscured by the triumph of the Protestant reformers in Germany, the failure of Charles's efforts to preserve the reversion of the imperial crown for his son Philip, and the disgraceful raising of the siege of Metz, which cost him thirty thousand of the flower of his troops, and permanently tarnished his military renown while weakening his political power. As he marched away from the walls that for fifty-six days had baffled his utmost efforts, he exclaimed in bitterness of heart, "Fortune is a strumpet who reserves her favors for the young."

To these German mishaps were added events in Italy of the same character, which conjointly marked the year 1552 as the most disastrous in the Emperor's life. In the article of reverses his career bears no resemblance to that of Diocletian, whose prosperity from the period of his election to sovereign power was uniform and uninterrupted. The two monarchs, though from different motives, appear to have contemplated abdication long before either carried the scheme into effect. The first, from a doubt of the continuance of fortune; the second from a rude experience of her fickleness. Charles, when only in his twenty-sixth year, married Isabella, daughter of Emanuel, King of Portugal. They lived happily together, and early in their married life agreed that, when their children grew up, they should themselves retire from the world, respectively, to a convent and a nunnery. But Isabella died sooner than her husband had calculated, and before he considered Philip fit to be emancipated from

leading-strings. Even so late as 1553, when the mortal illness of Edward the VI. rendered it certain that Mary Tudor would succeed to the crown of England, Charles made up his mind to offer himself to her, notwithstanding his own age and infirmities, in case his son and heir should decline the match so strenuously urged upon him. Charles was then fifty-three, and a martyr to gout; Mary thirty-eight, and Philip only twenty-seven. But the latter sacrificed his feelings to the family ambition, and saved his father from an egregious act of folly, supposing that Mary could have forgotten his former rejection of her hand, and have accepted the decaying sire instead of the blooming heir. The marriage, to her own great delight, but to the infinite disgust of the English nation, was concluded in January, 1554; soon after which date and event, Charles began to make serious preparations for his long meditated retirement from business. His sisters, the dowager Queens of France and Hungary, had, long before, offered to accompany him to whatever place of retreat he might select; but he cared as little for a family group as Diocletian did, and preferred being alone in his selected seclusion. The two Queens came to see him at San Yuste, but found little encouragement to make a long stay or repeat the visit. His mother, Joanna, nominally recognized with himself in all public documents as joint sovereign of Spain, had lived for nearly half a century in a state of mental imbecility, and only died in 1555.

Charles, remembering that Diocletian invested the ceremony of his abdication with the pomp of a public display, adopted the same course. Although four years younger than the Roman Emperor, he exhibited stronger symptoms of decay. His form was bent, more by disease than time, the furrows of anxiety and exposure seamed his countenance, his hands and legs were crippled by gout, his hair and beard were rapidly turning from iron gray to white. He was compelled to support himself by a staff, and walked with difficulty. On the 25th of October, 1555, in the royal palace of Brussels, he resigned to Philip, then twenty-nine, the sovereignty of Flanders. He delivered a studied oration in French, prompting himself from

a paper he held in his hand. He spoke, as kings are wont to do, leniently of his own errors, lauded his good intentions, reviewed all the enterprises of his life, and dilated on the reasons for his abdication, principally founded on his failing health. The portrait he drew of himself was more flattering than unexcited posterity is willing to receive as genuine, although his auditory at the moment responded to all he uttered with flattering indications of assent. Sir John Mason, the English envoy, an eyewitness, says in his report to his own government of the day, that Charles having pronounced a parting benison on his people “broke into a weeping, whereunto, besides the dolefulness of the matter, I think he was much provoked by seeing the whole company to do the like before ; there being, in mine opinion, not one man in the assembly, stranger or other, that during the time of a good piece of his oration, poured not out abundantly, tears, some more, some less ; and yet he prayed them to bear with his imperfection, proceeding of sickly age, and after mentioning of so tender a matter as the departing from such a set of dear and most loving subjects.”*

On the 16th of January, 1556, Charles executed the deeds by which he surrendered the Spanish monarchy with its dependencies to Philip, and at the same time arranged a truce for five years with France, by no means favorable to the interests of his own country, but still preferable to the legacy of an unfinished war. His resignation of the imperial crown of Germany, in favor of his brother Ferdinand, previously secured in the inheritance by his election as King of the Romans, followed in due course, after a considerable interval, during which, while Charles retained the title, he ceased to exercise either the power or responsibility.

The place selected for his retirement was the monastery of San Yuste, in the province of Estremadura, within a short distance of Placencia. The convent was occupied by monks of the order of St. Jerome, strict observers of their rule, but gifted with taste to improve their romantic locality with cultivated gardens,

groves, and rivulets, which greatly enhanced the natural beauties of the neighborhood. The venerable building, interesting in itself, and doubly so as having been the last earthly dwelling-place of the retired Emperor, was sacked and laid in ashes, in 1809, by the division of Marshal Soult, who, with their leader, had little reverence for historical traditions, and a keen appetite for relics capable of being converted into tangible currency. The retreat, when the modern Diocletian fixed on it, was well suited to calm the mind, to encourage religious meditation, and to blot out all vestiges of turbulent passion. But Charles was bending under bodily infirmity, racked by gout, and disordered by habits of over-indulgence in eating, which he could not muster philosophy enough to restrain, although his satiated ambition had relinquished the most extended empire in the world. Such is the inconsistent littleness of man, and so degrading are the tendencies of human nature.

Three years before Charles took up his abode at Yuste, an architect had been employed to prepare the requisite accommodations. A small building, very unlike the palace of Diocletian at Salona, was all that he required. The edifice was confined to eight rooms, on two floors, of moderate dimensions, furnished with all the appliances of comfort and luxury ; rich canopies and carpets, tapestry and costly hangings. The wardrobe was extensive, and the supply of plate so profuse, that the silver in the Emperor's sleeping apartment alone approached fourteen thousand ounces in weight. There were also pictures and books, selected with infinite care and judgment. Charles was too infirm to take much exercise out of doors. His principal recreation, unconnected with devotional observances, consisted in examining and arranging the internal structure of watches and clocks, in the manufacture of which, the great mechanic and mathematician, Giovanni Torriani, held an important position in his train, and became his most confidential companion.

The impossibility of making many clocks observe the same time is said to have drawn from Charles the often quoted commentary on his own folly in thinking he could, in his days of power,

* Quoted by Prescott in a note. Vol. I. Philip II.

compel millions of people to follow one creed and be governed by one mind. There was not much profundity in the remark, supposing it to have originally emanated from such experienced lips.

Charles's immediate attendants amounted to fifty in number, no great allowance for a retired monarch, and not more than the establishment of many wealthy country gentlemen. Amongst them were officers of state, still retaining their former designations, but discontented with reduced salaries and confined accommodation, and less reconciled than their master to the loss of worldly gayety and enjoyment. The rules against the admission of females were strictly enforced. The Emperor, observing that the women who came to the gate of the convent with their market produce, and on other commercial errands, lingered more than was necessary in conversation with the younger brethren, procured an order from the superior that any fair Delilah, who ventured to approach within two bow-shots of the portal, should be admonished by one hundred stripes.

When Charles enclosed himself within the walls of Yuste, he was far from adopting the total seclusion from political affairs which had marked the abdication of Diocletian. He was constantly consulted by Philip, by his daughter Joanna, regent of Castile, and by the great functionaries of state; to all of whom his advice was readily accorded, and more than once, when they went counter to his suggestions, he loudly expressed his regret that he no longer held the reins of executive government in his own hands. He specially interfered in questions of finance, expressed the most energetic displeasure when his own salary fell into arrear (no unusual occurrence), and finally decided that it should be paid in advance with an augmentation of one-fifth, to stimulate increased punctuality in future. Notwithstanding his artificial and habitual self-command, he had ever been subject to sudden outbursts of passion, and to these he sometimes gave way on trivial causes, which ought not to have disturbed the equanimity of a chastened and philosophic recluse. The discipline of Yuste does not appear to have controlled his temper with greater efficacy

than it did his appetite. Spiced frogs, stewed eels, and potted capons, inflamed constitutional gout, and gout prevented even monkish severities from exercising their legitimate influence in subduing the infirmities of the flesh. From the confessional and the scourge, Charles turned to the dinner-table, and became at last so difficult to satisfy in the article of gastronomics, that his cook, driven to the verge of his inventive faculties, exclaimed in despair, and with allusion to his master's mechanical propensities, that he knew not what novelty to hit upon, unless he served up to his majesty a ragout of watches.

There was nearly as much difficulty in settling the form in which the ex-sovereign was to be addressed as that which puzzled our home authorities and their delegates at St. Helena, during the captivity of the first Napoleon. It seems more strange, and perhaps weaker in a man who had voluntarily resigned power, than in one from whom it had been most reluctantly torn, to cling to the shadow when the substance had departed. Another inconsistency in man's heart which man's reason is unable to account for. On Charles's arrival at San Yuste, the worthy principal of the establishment, meaning to be consistently respectful, addressed him by the title of *paternidad*, or your paternity; but a better instructed brother immediately hinted to him that "majesty" would be more acceptable. The monarch more than once reminded his attendants and associates that he was still emperor. It was, in fact, not until more than a full year after his arrival at the convent, that his resignation of the imperial dignity was formally accepted by the Diet at Frankfort, on the 28th of February, 1558. He still used the title in his public and private correspondence. It is not to be inferred from this that he repented the step he had taken, or had any yearnings to recall the double act of abdication. His retirement was as sincere as that of Diocletian, without even the suspicion of a coercive impulse; but the ruling passion of his life, though abandoned, was not extinguished. He still delighted to be referred to as a political oracle. Relief from responsibility increased instead of diminishing his anxiety for the successful issue of the great events so

rapidly succeeding each other in the extensive kingdoms he had lately governed. Here again we have evidence that it was the decay of physical health rather than the weariness of gratified ambition, which substituted the cowl of the monk for the ermine of the despot. To the last his mind was filled with the idea of uniting Portugal to Spain, and greatly would his spirit have rejoiced could he have foreseen the subsequent consummation of his wishes under his son and successor, Philip the Second.

Diocletian, although an older man, survived his retirement for eight years. Charles was summoned to his great account before he had completed two. Bodily suffering weighed heavily on his spirits; the death of his sister Eleanor, his elder by only fifteen months, the Queen Dowager of France and Portugal, foreshadowed and perhaps hastened his own. They were fondly attached to each other, and her loss startled and admonished him with a presentiment that he was soon destined to follow her. Robertson's "Charles the Fifth," recommended by an elegant and captivating style rather than by accuracy of detail, was long received as the textbook. It has been corrected in many essential points by subsequent writers, who obtained access to materials beyond his reach, and prosecuted their researches with more scrupulous exactness.* The Scotch historian tells us that Charles emulated the most zealous of the flagellants in the severe expiatory discipline he inflicted on his quivering flesh, and that he rehearsed his own funeral with most extraordinary accompaniments. According to this authority, "he ordered his tomb to be erected in the chapel of the monastery. His domestics marched thither in funeral procession, with black tapers in their hands. He himself followed in his shroud. He was laid in his coffin with much solemnity." The *de profundis* was chanted, and the living corpse joined in the prayers offered up for the repose of his own soul, mingling his tears with those of his attendants, as if he too had been merely an accessory to the scene, and not the principal figure in the solemn mockery. The lid

was placed lightly on the coffin, the tapers were extinguished, the actors retired and the doors were closed. Charles then gently extricated himself from his gloomy shell, and groped his way in the dark to his own apartments. "Where Robertson got all these particulars," says Prescott (Life of Philip the Second), "it would not be easy to tell; certainly not from the authorities cited at the bottom of his page."

Without giving full credence to all the melo-dramatic mummeries which have been evidently exaggerated to produce effect, some kind of obsequies were certainly performed, the formal permission of the Church having been first obtained. The chapel of the convent was hung with black, and a large catafalque occupied the centre; but neither in person nor by deputy did the ex-emperor extend himself on the bier. The monks and the household gathered round, and wailed forth the burial service. Charles stood among them muffled in a cloak, and at the close extinguished the taper he held in his hand, and committed it to the priest, to signify that he surrendered himself, body and soul, to the will of God. The act, even modified as it appears to have been, in reality, implies a tinge of morbid disease in his mind, a constitutional gloom, perhaps some traces of the insanity peculiar to the royal blood of Castile, and of which his mother Joanna had furnished a melancholy example. Charles had often exhibited a passion for getting up funerals, and from the constant habit of thus commemorating the departure of his dear relatives and friends, the idea of including his own may naturally enough have presented itself to a temperament so intimately associated with the dreary paraphernalia of death. He seems to have dreaded the hereditary taint of insanity, as he constantly prayed that his faculties might be spared to him in the hour of dissolution.

The mock funeral was almost his last act, for in a day or two after, the symptoms of his mortal illness displayed themselves, and human remedies failed to subdue them. His understanding retained or recovered its full strength, and on the 9th of September, twelve days only before his death, he executed a

* See Prescott, Stirling, Mignet, Amedée Pichot, Gachard, Dr. Doran, &c.

long codicil to his will, in which he provided for his immediate attendants at Yuste, and once more emphatically placed on record the spirit of intolerance by which, above all other leading impulses, his life had been governed. His final injunctions to his son Philip, contained in the codicil alluded to above, called upon him to extirpate heresy with an unrelenting hand. He repeatedly expressed his regret at having respected the safe-conduct of Luther, and dreaded lest his sin of omission in not sending the great reformer to the stake should weigh more heavily against him in his future account than all his other delinquencies, for which he avowed sincere contrition. On the 21st of September, 1558, he breathed his last. His remains were first interred under the great altar of the chapel of the monastery in which he died. His will contained a wish that his head and the upper part of his body should rest under the spot where the priest stood, when in the performance of his ordinary duties; but as a question arose as to the propriety of admitting any bones, save those of a saint, in such a holy locality, the matter was compromised, after a warm and not very decorous debate, by forming an excavation in the wall, into which the head was introduced, while the feet were allowed, by this contrivance, to touch the verge of the hallowed precincts. But within a few years, the body was transported, by order of Philip the Second, to the palace of the Escorial, and there it has since reposed, in a magnificent mausoleum, beside that of the Empress Isabella.

We have seen that Charles was cold-hearted, ambitious, and bigoted in the extreme. His physical and mental development were slowly progressive. "Nondum," not yet, was the motto adopted by himself, in early youth, as if he felt his internal power, and was equally conscious that it would require time to advance to maturity. At forty his constitution gave way to the inroads of gout, and at fifty, he was a worn out man. The active period of his life was over-worked; he allowed himself insufficient sleep, and indulged in gluttony, an excess almost as pernicious as drunkenness, of which he was never accused. But having named his unamiable quali-

ties, let us not omit the more agreeable and attractive features of his character. He was fond of music, painting, and mechanism; he loved his wife, and treated her with respect and affection. Now and then he lapsed into a conjugal infidelity, but without offensive parade. He was a Joseph in chastity compared with Francis of France. He warmly patronized Titian, and though far from being such an ardent encourager of the fine arts as his rival and contemporary, the French King, he had a considerable taste for literature, and meditated, if he did not actually perpetrate, authorship. There are good grounds for supposing that he composed an autobiography, the manuscript of which, if still in existence, should be unearthed, if possible, and brought to light. If written in sincerity, and to set his conduct in a true aspect, as he expressed himself to the Jesuit Borja, in a conversation at Yuste, not long before his death, it would prove a valuable addition to the records of the time. Where is the manuscript, and how can it be discovered? When Sepulveda, his own selected historian, proposed to read to him some chapters of his work, Charles replied, "I will neither hear nor read what you have said of me. Others may do this, when I am gone. But if you wish for information on any point, I shall always be ready to give it to you." "A history thus compiled," Prescott justly remarks, "was of the nature of an autobiography, and must be considered therefore as entitled to much the same confidence, and open to the same objections, as that kind of writing."

Still bearing in mind the points of similarity in the characters and actions of Charles and Diocletian, we cannot fail to observe that the spirit of religious intolerance, exclusively applied, is much more apparent in the systematic persecution of heretical Protestants by the German, than in the general edict against the Christians as a class by the Roman potentate. Diocletian treated the matter more as a statist than as a high priest. He looked upon the Christians as dangerous innovators, antagonists of absolutism, and subjects whose doctrines interfered with the imperial prerogative. True, they were obedient to the laws, but by refusing outward re-

spect to the ancient deities so long reverenced in blind idolatry or utter ignorance by the people, they gave rise to questions which could not possibly be separated from the politics of the time. The Christians met in private and worshipped a single deity, omnipotent and eternal, through a single Mediator. They demanded the utter extinction of every other form of faith, of every other assumption of divine power. Paganism was unable to comprehend the unity, simplicity, and perfect isolation of their creed, its uncompromising conditions, and the sternness of its moral code. Instead of wondering at the ten authorized persecutions to which the converts of the early apostles were exposed during the three first centuries after the appearance of our Saviour upon earth, we may rather feel surprise that they were not far more sanguinary and exterminating. The Pagan emperors and their legislative satellites had better and sounder arguments to offer in extenuation of their cruelty than their so-called Christian successors who immolated their brethren by thousands for a simple difference in the interpretation of the one faith, which they all professed to reverence and believe.

The memory of Diocletian has been loaded with more odium than ought justly to fall to his share on account of the great religious persecution distinguished by his name. The decree was extorted from him almost on the eve of his abdication, and its execution devolved on his more active and virulent successors. He was no enthusiast, and while he preserved an habitual regard for the inmates of the Roman Pantheon, his mind was less turned to speculative inquiry on questions of religion and philosophy than to the practical labors of war and government. He either sanctioned or connived at the conversion of his wife and daughter, Prisca and Valeria—a fact which, with their baptism, rests on the assertions of Lactantius and Mosheim. Lucian and Dorotheus, Gorgonius and Andreas, officers high in favor in the imperial household, were not only converts to Christianity themselves, but protected the brethren of their order by their powerful influence. They were probably obliged to appear in the train of the Emperor when

he sacrificed in the temples of Jupiter, Apollo, or Minerva; even as Naaman was compelled to wait on his earthly master in the house of Rimmon; but within their own households, with their wives, their children, and their slaves, they enjoyed the free exercise of Christian rites. Diocletian and Constantius were in fact the friends of the Christians; their bitter and implacable enemies were Maximian and Galerius.

The sated ambition of the two Emperors of Rome and Germany, and their spontaneous descent from absolute power to privacy, present the most impressive commentary that we possess on the conclusion of a much wiser monarch than either, after a longer enjoyment of the privileges and appendages of greatness. “I have seen all the works that are done under the sun, and behold, all is vanity and vexation of spirit.” Happiness, as we understand the word under human qualification, could scarcely have been enjoyed by Diocletian or Charles of Austria in either of the extremes by which their lives were marked. The monarch weary of power is as little to be envied as the disappointed or worn-out recluse. Truly does Lord Byron observe of the last memorable example:—

“ The Spaniard, when the lust of sway
Had lost its quickening spell,
Cast crowns for rosaries away,
An empire for a cell;
A strict accountant of his beads,
A subtle disputant on creeds,
His dotage trifled well;
Yet better had he neither known
A bigot's shrine, nor despot's throne.”

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Dublin University Magazine.

POMPEII.

AN EXTRACT FROM PLINY THE YOUNGER.

PLINY the Elder was at Stabiae, now Castellamare, on the coast, farther to the east from Vesuvius than Pompeii. He wished to approach the hill to rescue some of the inhabitants of the little towns at its base, but found it impracticable. Being then at the house of his friend, Pomponius, and wakened from a sound sleep by his attendants, who were scared by the fury of the eruption, he got up and joined his friends.

“ They consulted together (we are quoting his nephew, the Younger Pliny) whether it would be more prudent to trust to the house, which now shook

from side to side with violent concussions, or fly to the open fields, where the calcined stones and cinders, though light indeed, yet fell in large showers and threatened destruction. In this distress they resolved for the fields. They went out then, having pillows tied upon their heads with napkins. . It was day, but a deeper darkness prevailed than in the most obscure night. They thought proper to go down farther upon the shore to see if they could safely put out to sea, but they found the sea still extremely high and boisterous. There my uncle, having drunk a draught or two of cold water, threw himself down upon a cloth, which was spread for him, when immediately the flames and a strong smell of sulphur dispersed the rest of the company, and obliged him to rise. He raised himself up with the assistance of two of his servants, and instantly fell down suffocated, as I suppose, by some gross and noxious vapor, having always had weak lungs, and being subject to a difficulty of breathing. As soon as it was light again, which was not till the third day after this melancholy accident, his body was found entire and without any marks of violence on it, exactly in the same posture in which he fell, and looking more like a man asleep than dead."

This first eruption of Vesuvius on record occurred A. D. 79. It buried the little maritime city of Herculaneum at its foot under a flood of lava, and Pompeii, lying a little more to the east, under a stratum of ashes and pumice-stone, these being overtopped with a mingled shower of ashes and water. The last covering served as a mould to present to spectators upwards of seventeen centuries later in time, the shapes of poor human beings who breathed their last in agonies indescribable.

The loss of life was by no means proportioned to the number of inhabitants. Many more, however, perished than was supposed, even so late as when Sir Edward Litton Bulwer wrote his celebrated romance. Good authorities calculate that in the portion of the city already uncovered, amounting to about one-third of the whole, the skeletons of six or seven hundred people have been found; since Signor Fiorelli undertook the management of the excavation, in

1861, he has lighted on more than forty. The deaths of some were caused by an earthquake.

POMPEII SINCE ITS REDISCOVERY.

Pompeii no more escaped the researches of treasure-seekers than did the Pyramid of Cheops. Little gold and silver and few valuable sculptures have been discovered in Pompeii since its opening in the last century. Alexander Severus extracted much marble from its ruins to furnish the ornaments of palaces, the material which filled up streets and houses not being difficult of removal. Still, though the site of the buried ruins bore the name of *la Civita*, the city, no researches were made. Even a subterranean canal was cut in 1592, traversing the city in a southwest direction, and the foundations of several public buildings laid bare, yet public curiosity was not effectually aroused. At last, in 1748, in the reign of Charles III, the first Bourbon King of Naples, Don Rocco Alcubierre, a Spanish colonel of Engineers, being employed on the subterranean canal, which supplied water to the town of Torre Annunziata, having his attention roused by the tradition of the remains of the houses, fell to work in the street of Fortune, and discovered a picture with festoons of eggs, fruit, and flowers, the head of a man, an owl, a helmet, various small birds, and other objects. On the 19th of April, 1748, the first skeleton was found, and before the year was over, the Amphitheatre was cleared out. November 27, 1756, the name Pompeii was first applied, but it is not known on what ground. However, the discovery on August 20, 1763, of an inscription, wherein Vespasian restored to the municipality of the Pompeians all public grounds then held by private persons, confirmed the justness of the former conjecture.

The work of excavation went on in a rather leisurely way till the short occupation of Naples by the French, in 1806, when a new spirit seized on the explorers. The amphitheatre was re-cleared, after having been allowed to fill again with dust and drift of ashes, and the greater part of the street of the tombs, the line of walls, and the forum were laid open. At the same time, Mazois, encouraged by Madame Murat,

commenced his great work on Pompeii. Garibaldi, during his short career of power, thought he was putting the right man in the right place when he appointed Alexander Dumas director of the museums and excavations. Count Monte Cristo lived at Naples in princely style, and paid one visit to Pompeii—thus disappointing his public-spirited patron. Under Victor Emanuel, the Cavalier Giuseppe Fiorelli has done whatever could be effected by true archaeological zeal, sound judgment, and extensive knowledge. He has, by means of representations on walls, and by sound inductions from collected facts, restored the upper stories of houses, and those projections which nearly met over the heads of the passengers in the narrow streets, as upper projecting stories did in our old Gothic towns, and do at this day in Algiers and some Oriental cities. Some of these in Pompeii were open balconies, others were of solid brick-work, with small casements.

THE PRINCIPAL PUBLISHED WORKS ON POMPEII.

Readers interested in the subject may consult the following treatises:

“Les Ruines de Pompéi, dessinées et mesurées, par Fr. Mazois, architecte, pendant les années 1809, 1810, et 1811;” four large volumes; Didot, Paris, 1812—1838. Sir William Gell’s “Pompeiana,” first series, 2 vols., 8vo, 1824; second series, 2 vols., 8vo, 1830. Donaldson’s “Pompeii,” 2 vols., folio, 1827. Breton’s “Pompeia, décrite et dessinée;” large 8vo; Paris, 1855. Overbeck’s “Pompeii, exhibited” (we translate the German title) “in its Buildings, Antiquities, and Works of Art;” Leipsic, Engelmann; two volumes, about to be completed; second edition. The second volume is entirely devoted to the works of art. This work is about the fullest and most accurate yet published. Fausto and Felice Niccolini are publishing in numbers, “Le Case ed i Monumenti de Pompeii, disegnati e descritti” (The Buildings and Monuments of Pompeii, drawn and described); folio: Naples. Upwards of thirty numbers are already published at 15 francs each. Fiorelli’s “Pompeianorum Antiquitatum Historia,” is a record of the excavations and discoveries from 1748 to 1860. This is a very valuable work, being made from

the journals of those who had charge of the excavations from the beginning. As already noticed, Signor Fiorelli is the present able director of the works.

There are many other publications scattered through libraries, being more or less general in their grasp; some only describing the inscriptions on walls, others the public buildings, etc. Among other fine books on the subject of Pompeii, in Trinity College, Dublin, may be seen the large folio work by Wilhelm Zahn, Berlin, 1844; the large colored plates exhibiting the paintings on the walls, distinguished by accurate drawings of male and female figures in the freshest and most agreeable style of coloring, and by the ornamental borders dividing the walls into compartments, the coloring being of the most brilliant character. In the large works, which are only to be found in public collections and other great libraries, occur many representations unfit for re-production in popular works.

Our readers, doubtless, have seen the two Pompeian volumes issued by the Society for the Promotion of Useful Knowledge, published about thirty-five years since. It has not been re-edited. Dr. Thomas Dyer, having paid many visits to the old city in 1865 and 1866, and consulted the later works on the subject, has now issued the volume named below,* using as much of the work just named, and retaining as many of its illustrations as seemed desirable, adding much new matter, and supplying views and plans of buildings disinterred during the last thirty years.

THE STREETS AND HOUSE FRONTS OF THE OLD CITY.

Taking size into account, Pompeii, in our days, would scarcely be called a city. It was of an oval outline, the longer diameter being about three-quarters of a mile, the shorter half a mile. The breadth of the streets varied from eight to twenty-two feet, including the sidewalks. They were paved with irregular

* Pompeii: Its history, Buildings, and Antiquities. An Account of the Destruction of the City, with a full Description of the Remains, and of the Recent Excavations, and also an Itinerary for Visitors. Edited by Thomas Dyer, LL.D., of the University of St. Andrew’s. London: Bell and Daldy.

pieces of lava. The side paths were raised from a foot to eighteen inches above the carriage level, the space between the kerb-stones and the houses being covered with stucco or a coarse mosaic of brick-work. One row of raised stepping-stones occurred at intervals in the centre of the narrower streets, two or three aided the passengers to get across the wider ones with comparatively dry soles in bad weather. Ruts worn by the wheels of the narrow chariots may still be traced. With regard to the confined breadth of the streets, Dr. Dyer remarks:—

“The general narrowness of the streets, however opposed to our notions of beauty, comfort, and salubrity, is by no means peculiarly the reproach of Pompeii, but common to the Italian cities of the age in which it perished. When Rome was burnt during the reign of Nero, and the Emperor caused it to be rebuilt with more ample streets, persons were not wanting to say that the ancient form of the city was more healthy, because the narrowness of the streets and the height of the houses afforded little access to the sun's rays.”

Up to 1824 only two stables were found, and these, as Mazois asserted, were for mules and asses, which were employed only in turning mills. The use of wagons was scarcely known, some of the streets being so narrow that there was no room for two bigas, each only four feet wide, to pass each other. The foot passengers had the streets very much to themselves, and made good use of the stepping-stones—

“A convenience of no small importance where there were no sunk gutters, and where, during the heavy winter rains, the carriage-way of those streets, which, according to the drainage of the ground, carried off the waters of three or four others, must have flowed like a torrent on a Welsh cross-road. It should be observed that all the streets are straight, and intersect each other at right angles.

The source or sources from which the city was supplied with water is as yet a matter of doubt; the system of drainage is also a thing not understood. Some small sewers have been discovered, but nothing to intimate a good system of sewage. There was certainly

abundance of water, and in one or two instances deep-sunk wells have been discovered. The forum, instead of the irregular pieces of lava, was paved with marble flags, few of which are now to be seen. Wherever a hole occurred at the junction of three or four lava slabs, the interstice was filled with a bit of iron, presenting, as we think, an unsightly combination. From Dr. Dyer's popular volume we extract a description of the appearance presented by the houses:—

“Except in those quarters where the public buildings were collected and grouped together, there can have been nothing striking or magnificent in the appearance of the place. The houses were of small height, and externally gloomy, the lower part being usually a blank wall plastered over, and often painted with different colors, the upper pierced with small windows to light the apartments on the first floor. . . . In some of the streets only fifteen feet wide, half of the breadth was occupied by foot-paths, leaving only seven feet six inches for the carriage-way. Expense and ornament were reserved for the interior, on which they were profusely lavished. Not a house yet found in Pompeii has any pretension to architectural merit on the score of its elevation—not a house yet found is ornamented with a portico. The Villa of Diomedes possesses a porch formed by one detached column on each side of the doorway, and this is the only approximation to a portico in the place.

THE INTERIORS.

Let us now examine the interior of one of these houses, which presents such an uninviting exterior.

Having entered the street door, you find yourself in a passage or vestibule, where the porter had his seat, and on the floor of which was represented a guardian house-dog, ready to make a spring on suspicious intruders. The warning—*Cave canem!* (beware the dog)—legibly written at his feet, was supposed to add to the effect of the symbol. A door in one of the walls of this vestibule admitted you to the atrium in which ordinary guests were received, and ordinary business interviews were held. In the centre of the

ceiling of this hall was the *compluvium*, an oblong space, open to the sky, the neighboring roof sloping to it, and through the mouths of fantastic masks at the corners, poured down the rain when such was the will of Jupiter Pluviosus. This water was received into the *impluvium*, a tank directly under it, whose length and breadth corresponded to those of the hall. From the impluvium the water was conveyed to cisterns for future use.

Sometimes a fountain played in this atrium. The pavement mostly consisted of elaborate mosaic work. Modern lecturers on art say, that carpets or mosaics should represent ornament merely, not any thing on earth or above it; it is not pleasant, they say, to fancy your feet treading on the backs of hedgehogs, or the horns of cows, or a tiger's claws, or a line of bristling bayonets. The Pompeian artists were regardless of this inconvenience. A favorite figure with them was the FRET, apparently consisting of rectangular slabs set upright on the floor, and meeting each other at right angles in a maze-like fashion. The promenader over another pattern was under the impression of treading on a series of shallow boxes from which the lids had been removed. Some of these patterns were in light and black blue, others in a variety of pleasing hues.

The walls were adorned with paintings, or arabesques, or specimens of beautiful marbles; a painted awning placed above the vacancy overhead, intercepted the intrusive rays, and gave additional beauty to the scene beneath; and upon hot summer days, a seat upon sofa or chair, with twisted legs beside the impluvium, was a thing of enjoyment to the patrician and the members of his family, or his visitors. *Alæ* (wings) or small chambers at the sides of the inner part of the atrium, probably served as bed-chambers for country visitors. At this inner end was the *Tablinum*, in which the master of the house kept his valuable pictures (*Tabulæ* or *Tabellæ*), and his family archives. This muniment room was open to the atrium, though provided with means of being isolated, and through it, as well as by one or two passages (*fauces*) beside it, you might pass to the peristyle (circuit of pillars).

This was a kind of court surrounded by a colonnade, and having a little thicket of shrubs and a fountain in the centre. Such an inner court is found on the premises of every gentleman of the south of Spain at this day, combining the agreeabilities of shade, of verdure, and of falling spray. Then there was the garden, great or small (the *Xystus*), the *triclinium* (three sofas) or dining-room, the three tables arranged so as to represent the Greek Π, and sundry small bed-chambers. Occasionally there was a winter dining-room placed in the neighborhood of the bake-room, and the *Œcus* (*Oxos*), or family sitting-room. While the great folk enjoyed or endured life on the ground floor, the servants did their duties and took their ease on the floor above them. Some roofs were flat, as at this day in Palestine, and the patrician's family enjoyed the sea-breeze there on the fine evenings of the south.

SHOPS AND TRADES.

There were no monster commercial houses, no dazzling, or even respectable looking shops, much less a shopocracy, in Pompeii. Your patrician let off some portions of the exterior of his block to people in business, or perhaps had the produce of his own lands sold in them. These shops were profitable items in a nobleman's or noblewoman's inheritance. On a wall near the amphitheatre has been discovered this inscription—"In Praedio Juliae Sp. F. Felicis locantur Balneum Venerium et Nongentum Tabernæ Pergulae Cœnacula ex Idibus Aug Primis in Idus Aug Sextus Annos Continuos Quinque S.Q.D.L.E.N.C. (On the estate of Julia, daughter of Spurius Felix, are to be let, a bath, Venereum (women's portion of a house), nine hundred shops, with booths and garrets, for five continuous years, from the first to the sixth of the Ides of August (13 Aug. one year to 8th of the next year).") The capitals seem to imply that no persons engaged in licentious traffic would be treated with. (*Si quis domi lenocinium exerceat, ne conducito.*) An Italian gentleman at the present day does not despise the process of handing over his olives, or any other product of his acres, to a man of business, and receiving hard *lire* in

exchange, nor is he ashamed of carrying home in his aristocratic hands some table commodity purchased in the market. The shop-tenant of the Pompeian great man might, perhaps, have a room or two beyond his shop, but it was an exceptional case. However, it was not unusual for him to own a couple of rooms on the first floor. Let us take what is supposed to have been a cook's shop, and inspect its arrangements. The whole front, except the entrance, is occupied with a counter of masonry, projecting an arm into the shop from its end next the door. This counter is about three feet high, and the cook can hold a conference across it with outside customers, as well as others inside. Four large jars of baked clay are built into the counter, their tops on a level with its surface, and on the end of the arm projecting into the shop is an oven. The jars are supposed to have held oil, olives, or a highly valued pickle called *garum*, the ingredients of which were entrails of mackerel, macerated in brine. This precious compound was valued at £4 per gallon! A thorough cleansing of these jars must not have troubled the cook's head. Travellers assert that such immovable vessels are to be seen in Rome at this day. In the kerb-stone in front are holes probably for the insertions of posts supporting an awning; the door and movable shutters secured all at night.

Modern explorers have found out but little of the art and mystery of the trades practised at Pompeii, baking and dyeing excepted; concerning the first of these necessary avocations Dr. Dyer thus speaks:—

“Several bakers' shops have been found in a tolerable state of preservation. The mills, the oven, the kneading troughs, the vessels for containing water, flour, and leaven, have all been discovered, and seem to leave nothing wanting to our knowledge. In some of the vessels the very flour remained, still capable of being identified, though reduced almost to a cinder. But in the centre some lumps of whitish matter resembling chalk remained, which, when wetted, and placed on a red hot iron, gave out the peculiar odor which flour thus treated emits. Even the very loaves, in perfect, though carbonized, shape, have

in some instances been found in the oven. One of these bakers' shops was attached to the house of Sallust, another to the house of Pansa; probably they were worth a handsome rent.”

There were no less than fourteen shops attached to the sides and angles of Pansa's house besides his own bakery. Part of the oven and the cone of one of the mills may be seen yet by visitors to Pompeii; they are engraved in Donaldson's splendid folio, 1827.

The bake-house described by our author belonged to the owner of the entire premises, and was not rented from any Sallust or Pansa.

The work-room was about 33 feet long and 26 broad, and contained four mills. An idea of the construction of each may be obtained by supposing the lower half of a gigantic dice-box to be loosely set on a cone, whose apex comes up to the middle or narrower part of the instrument. The upper portion of the box serves as hopper to receive the corn, and an iron belt set round its central or narrower portion is pierced here and there with holes, into which are inserted handspikes. These being turned round by men's arms, or pulled by a poor blind ass or mule, the lower part of the machine revolves on the cone, and the corn dropped on its (the cone's) upper portion through holes is gradually ground, and falls out below the lower rim of the outside case on the base of the machine. A pivot set in the top of the cone prevents the concave surface of the case from coming into absolute contact with it. “The machines are about six feet high, and constructed of a rough gray volcanic stone full of large crystals of leucite,” the grinding surfaces being comparatively rough.

The author here remarks that “the instruments intended for mere use among the old Italians exhibit rough workmanship, while articles intended for ornament or luxury display great skill and care. Among the many implements still preserved in the museum of Naples, and copied in the present work from Donaldson, there is to be seen a curious key, which has all its open work confined to the centre of the instrument, the edge being merely milled in high relief. Much fatigue was endured by the slaves or convicts whose duty it was to keep these machines

in exercise, but we are not to suppose that the mills turned by women, and mentioned in sacred and profane history, were of such dimensions. The machines constructed for them and the mode of operation allowed them to sit at their labor. We learn from Vitruvius, who was contemporary with Augustus (first century), that mills turned by water were not unknown to the Romans. In our text is given the translation of a fine passage from Antipater of Thessalonica, who flourished in ante-Christian times, and left some poetic reliques." The description in the passage evidently applies to a water-mill such as is still in use, and its spirit is that in which a great and new invention is welcomed.

"Set not your hands to the mill, O women that turn the mill-stone. Sleep sound though the cock's crow announce the dawn, for Ceres has charged the nymphs with the labors which employed your arms. These dashing from the summit of a wheel make its axle revolve, which by the help of moving radii, sets in action the weight of four hollow mills. We taste anew the life of the first men, since we have learnt to enjoy without fatigue the produce of Ceres."

The ordinary process of wetting the meal, introducing the yeast, and baking did not much differ from modern processes. Pliny, however, in his curious work, has preserved, if we remember rightly, from eight to ten different receipts for making bread. Some cakes received their shapes in moulds before being baked, and some were baked on the hearth under hot embers. Four of the moulded cakes (carbonized) are still preserved, and we find them among the illustrations.

The only other occupation, of the processes of which we have any certain information from the drawings or paintings in Pompeii, is that of the fuller. Wool was the universal material of Roman clothing for a long time; silk came late into use, and linen garments were in little request, and enormously expensive. It requires neither logic nor rhetoric to prove that woollen drapery is far from being well adapted to a hot climate. The chief garment of the Romans was the *toga*, woven in one piece, and it was a point both of cleanliness and dignity to keep the article fresh

and clean, so the fullers were kept tolerably busy. These artists do not appear to have been acquainted with the qualities of soap. They saturated the *toga*, worked fullers' clay well into it, placed it in a vat partially filled with the clayey liquid, and, with tunics tucked up, vigorously pounded the web with their feet. The operation having endured long enough, clean water was supplied, and then the twisting took place, and the article was hung out to dry. Being afterwards well teased, it was laid over a beehive frame, under which was set a small pot, with sulphur sprinkled on live coals. After this fumigation it underwent a special good bleaching by being laid on a grating in the sunshine, and kept well wetted with water.

Pictures illustrating these processes, all of which have been described by Pliny and others, have been found on the walls of a *Fullonica* (scouring-house) in the *island* in which the "House of the Tragic Poet" is situated. Of four figures with their legs in the vats, one only appears trampling the cloth; the other three are lifting it, and examining the progress. In another representation the cloth is hung on a line, and a man engaged in carding it. Then we have a naked figure with the beehive frame over his head, and the sulphur pot in his hand. Minerva's owl is perched on the summit of the frame. A lady is sitting near, examining a cleaned piece which a female attendant is submitting to her inspection.

WRITINGS ON THE WALL.

The *Ædile*, or inspector of public buildings, was an important man in the eyes of every citizen. It was a great point gained if a shopkeeper could advertise his patronage.

We subjoin the mode of doing the thing eighteen centuries since in Pompeii:—

"MARCUM. CERRINIUM. VATIAM. ÆDILEM. ORAT.
UT. FAVEAT. SCRIBA. ISSUS. DIGNUS. EST."

"The Scribe Issus beseeches Marcus Cerrinius, the *Ædile*, to patronize him; he is deserving."

If the scrivener Issus found in some time a more desirable patron than M. C. Vatiam, he would cover the lines with a coat of stucco, and on it give an airing to his improved sentiments. Layers of these coats have been removed, and in-

scriptions of widely different dates been brought to light. Tavern-keepers could not be silent while scribes were blowing their trumpets. On the wall of a house of entertainment in the *Via del Lupinare* was drawn an elephant encircled by a serpent, and attended by a pigmy, and over it the inscription:—

“SITTUS RESTITUIT ELEPHANTEM.”
“Sittius has restored the elephant;”

as an innkeeper in our day might set up “The Blue Lion revived.” Underneath were the lines—

“HOSPITIUM HIC LOCATUR,—
TRICLINIUM CUM TRIBUS LECTIS ET
COMM...”

Equivalent to “Here stands a House of Entertainment — a Dining-room with three Beds, and other conveniences” (*commodis*, the four last letters, and the remaining words being lost). Near this house was another with checkers painted on the door-posts. On the wall were painted two large serpents, representatives of the *Lares Viales* or *Compitales*, the little guardian deities of the cross-roads, and rendering the locality safe from all petty profanations. The presence of tame serpents was nearly as ordinary an occurrence in an Italian house at that time, as that of cats in our days. They rid the place of vermin. An inscription over the serpents warns off the gaping idlers who obstructed the traffic of such places:—

“OTIOSIS LOCUS HIC NON EST: DISCEDE MORATOR.”
“Here is no place for idlers: depart, O loiterer!”

Several of the inscriptions still extant are puffs displayed before the election of *Ædiles*, *Decemvirs*, and other magistrates. Concerning these we shall quote Mr. Dyer:—

“The normal form of electioneering advertisements contains the name of the person recommended, the office for which he is a candidate, and the name of the person or persons who recommended him, accompanied in general with the formula—‘O. V. F.’ From examples written in full, and recently discovered, it appears that these letters mean *orat* (or *orant*) *vos faciatis*, ‘be-seech you to create *Ædile*,’ and so forth. The letters in question were, before this discovery, often thought to stand for *orat ut faveat*, ‘begs him to favor,’ and thus the meaning of the inscription

was entirely reversed, and the person recommending converted into the person recommended.”

On the house called “Pansa’s” such an inscription appears, which, if the “O. V. F.” mean “prays that you would create,” must be a request from Paratus to the passers-by that they would appoint Pansa as *Ædile*. Mr. Dyer conjectures, apparently with justice, that Paratus got the inscription placed on the front of his own, rather than on that of Pansa’s tenement, which he would be disfiguring in some respects by the sprawling letters. If Pansa was the author of the scroll, it is probable that he would have added several other names to that of his partisan Paratus. The inference to be naturally drawn is that the house belonged to Paratus, and not to Pansa.

Sometimes a whole corporation join in recommending a candidate, and then the wags would add the eulogium of the guild *Pilicrepi* (ball-players) the *Seribibi*, the late topers, the worshipful company of the *Dormientes Universi*, sleepy heads in general, or even the Pompeians entire. The teacher Valentius being weak in grammar, an ill-natured neighbor wrote on his house that he—“*Valentius cum discentes suos* (discipulis suis), favored so and so.”

Some of the *graffiti*, scribblings in chalk and charcoal, contain extracts from the poets, apparently by undeveloped scholars. Others are amatory, and some are of a very uninteresting character indeed. Balbus, or Rutulus, or Vulpinus complains of a cold in his head, or devotes some shabby neighbor, who did not invite him to supper, to Cerberus and the other dwellers in Hades. Occasionally he invokes a blessing on a thoughtful man who sent the invitation. Now and then, as in the margins of circulating volumes, a bitter joke is made by Scribe No. 2 on the observations of Scribe No. 1.

“Some of the *Graffiti* on the interior walls and pillars of houses are memorandums of domestic transactions; as, how much lard was bought, how many tunics sent to the wash; when a child or donkey was born, or the like.”

One of these, apparently from the overseer of the tasks, is interesting as revealing the names then borne by Pom-

peian women, such as Vitalis, Florentina, Amarullis, Januaria, Heraclia, María (feminine of *Marius*, not *Maria*), Lalagia, Damalis, and Doris. Of inscriptions and pictures not fitted for description in a popular book or a review, there is information more than enough in Fiorelli's great work.

DE MORTUIS.

However the bodies of the middle and lower classes were disposed of, the aristocracy had their dead burned with the ordinary ceremonies, the unconsumed parts collected, and laid in those monuments which line either side of the "Street of Tombs." A tolerably large semicircle in cut stone, about two feet high, placed near one entrance of this street, seems to have been considerably intended for the convenience of wearied people who had come to visit this receptacle of the remains of their departed relatives, as seats are set up in our squares. With the advance of civilization and good feeling among ourselves, we hope our children shall see public play-grounds set apart for the lower class of town and city children, and straight or curved seats surrounding them for the convenience of laborers after their day's work, and of tired and aged people in general. Within one of these funeral monuments, viz., that of Scaurus, fast visitors are gratified with bas-reliefs representing the gladiatorial combats and the fights with wild beasts which were so dear to the old Italians. Romantic youths, in whose ideas a knight in armor presents one of the most noble outlines conceivable, would feel nothing but disgust looking on the ignoble, commonplace shapes of helmets, greaves, &c., of the hapless combatants. Mazois (see before) first published outlines made from these works of art, which have been since copied by Donaldson, and in the work published by the Society for the Diffusion of Useful Knowledge, and in Mr. Dyer's volume. In Donaldson's folio may be seen an engraving of a helmet which was covered with etchings of Eneas's escape from Troy.

POMPEIAN ART.

There is much to be said concerning the many finely outlined and beautifully-colored works left on the walls of the

atriums, and tricliniums, and peristyles of the buried city. The colors which endured so long began to fade from the time they became exposed to the action of the open air. The vermillion in many cases became black, and changes for the worse took place in other colors. If the rooms in the walls of which they were found had been roofed in, their destruction would have been averted. However, the successful removal of many beautiful specimens to the museum of Naples has been effected. Only about one-third of the city has been exposed to the day, and under the able superintendence of the present commendatore, and the hoped-for intelligent care of his successors, many other fine works of early art may yet be brought to light. We do not give native Roman artists credit for such noble works as "Achilles delivering up Briseis" in the house of the Tragic Poet; the "Battle of Issus," a mosaic in the house of the Faun, &c. The south of Italy was a favorite resort of the Greeks from the early days when the Messenian refugees built their new city (*Neapolis*) on its sunny shore; and we are persuaded that the best specimens of Pompeian art were executed by native Greeks or their descendants. It would be difficult to overpraise the relies of many of these artists. They appear not to have availed themselves of the advantage of laying one color on another, and their soft outlines are frequently made out in the shading, and are consequently more indistinct, and more difficult to be transferred. Not that they neglected to mark the wall in the first instance with a sharp instrument; these incisions are yet visible. They were to a certain point acquainted with perspective, and availed themselves of the different vehicles for colors now known—gum, wax, thin glue, size, volatile, and fixed oils.

Artists in these ancient days possessed the secret of applying to the walls of rooms colors which seem to bid defiance to the ravages of weather or the action of aerial gases. Wax in a hot state, and previously prepared by elaborate processes, seems to have been the vehicle of these enduring hues.

We really would wish for a large margin, in order to dwell in detail on the charming delineations of the painted

walls, the medallion pictures in the centres of the compartments, and the appropriate borders as given in the large folio volumes of Donaldson, London, 1827, and the rich and still larger work of Zahn, Berlin, 1844. Sitting in the atrium, or peristyle, or *œcus*, and casting your eye on any of the walls, it rested there with the same enjoyment as if it took in a landscape; the general effect of which it gave, though in a formal and conventional manner. The lower part of the wall was painted in dark colors, reddish purple prevailing, the central portion in fresh varied colors, and the upper part had a white ground. It thus shadowed out the dark rough banks, bridges, rocks, and shrubs of the foreground of a landscape, the gay greens, reds, and yellows in the centre, and the bright sky over all.

The central portion of the wall from side to side was generally divided into three compartments, with a medallion landscape or group in the centre of each. Sometimes the same hue was used as the ground of all, sometimes they differed in color. Perhaps the most curious feature was a high and narrow compartment at each side of the central compartment, the base being, say, a semicircular alcove, or summer-house, with light, airy spars shooting up from its circuit to the upper part of the wall. As the eye moved up, it rested on steps ascending to doors with goats gambolling on them. House-fronts narrowed in perspective, with balconies and casements, still soared one above the other, all being accompanied by the airy pillars from the circuit of the summer-house. Sometimes these borders to the central compartment were lofty entrances to some building, embellished with fine architectural details, worked in with harmonious coloring; and a graceful female figure, coming forth from the interior, was gazing from under the lofty architrave out on the spectators. Fine instances of this disposition will be met in Diomed's Villa.

The painter having used mathematical exactness in the central portion of the wall, gave way to an exuberant fancy in the bright upper region; arabesques, groups in pursuit of each other, and the wildest conceptions were disposed in brilliant hues, still leaving the

general white effect unimpaired. The ceiling exhibited lozenges inclosed in squares, concentric squares, and a variety of figures; the borders in bright and fresh colors on a light ground.

When the compartments were dark the divisions were nicely made with strings of flowers. In some instances the central compartment of the wall was a soft green, those on each side being red. In others the centre-piece was yellow; green prevailed in the architectural fantasy on each side, and the lateral compartments were dark red. In a few, the three divisions were green, red and yellow prevailing in the separating vertical borders. Yellow compartments were sure to be distinguished by purple borders, the production of harmony and contrast of colors being processes well known to the Pompeian painters. In the house of the centaur, one of the walls represented in Zahn's great work, had its three central compartments in dark red, the better to display the central pictures. These consisted of historical or mythical subjects; a cock or hen, with feathers carefully colored; a dog, or some other animal, the dog being marvellously long and thin in some cases. The landscapes were generally such pieces as would gain no notice in a modern exhibition. Some commonplace bits of scenery were displayed, and buildings about as interesting as overgrown trunks or boxes, scattered over them. Sometimes on a distant hill a building would be put in as violent a state of perspective as if the artist had taken his stand by the end wall. Ducks in a pond were favorite subjects: the domestic animals being generally well drawn and colored. We exempt from any decided praise the wall in Diomed's Villa, painted so as to represent a section of the sea with fishes glowing in rich reds, yellows, and browns, disporting, the bright hues not in the least dimmed by the bluish green medium through which they were seen. We find among the Pompeian artists deep skill side by side with the most primitive and naive pictorial processes. In the same villa is depicted a tree, triangular in outline, leaves of the brightest green, fruit of the clearest red, and all enhanced by a glaring yel-

low ground. When the painter did not find himself tied down by the exigencies of a known historical or mythical subject, he generally indulged his fancy by adding fanciful bodies and tails of fish or serpent, amply provided with long fins pointing backwards, to dogs', or horses', or otters' heads, to which he generously left their necks and forefeet. Such creatures as these would be found in spots where their presence would not excite blame, and sometimes in the centre of one of the great compartments of a wall. Few of our modern painters would have the hardihood to surround their compositions with a tolerably broad red border, such as we have seen, to pictures in Donaldson's and Zahn's works.

In the collections just named are our old acquaintances, Edipus and the Sphynx—he triumphantly laying his finger on his forehead, and she sitting on a little platform, gazing at him with considerable vexation in her face, and seeming to take no comfort from a half-devoured human body lying at the foot of her bad eminence.

On one of the walls of the Pantheon (see Sir William Gell) are depicted a youth and maid with the traditional names of Mars and Venus. It is such a picture as a young artist would send to the exhibition on his first year.

The lady's costume is as unexceptionable as if the artist had one of Miss Edgeworth's correct young women sitting for him, and the expression of both faces is made up in equal proportions of shame-facedness and a little fright.

But the Venus sitting in a graceful attitude on a bank and fishing, with Cupid lower down, and engaged in the same amusement, is a charming little composition. Alas! why do not the young ladies of Europe attentively study the graceful and natural fashion in which the heathen goddesses and their Grecian female worshippers disposed of their hair? Let them contrast the hard look given to their faces by drawing it all backwards, to the sweetness and grace added by letting the same natural ornament act as a soft framework.

Much praise is not due to the artist who, intending to express the idea of love gaining possession of the soul, represented Cupid thrusting the lighted

end of a torch against Psyche's breast. It is hard to exclude the idea of physical torment from the action.

House decorators have taken several useful hints from the fine works found in Pompeii. Who has not gazed with pleasure on a single figure, or group of two, loosely arrayed in drapery of light and cheerful color, gracefully floating in, or progressing in easy attitudes through a bluish green atmosphere? Several of these groups, finely drawn and painted in a masterly style, are to be found in Zahn's work. One group is called "Pasiphae and Dædalus," others "Mars and Venus." In most cases the male figure is giving support in some way to the female, and is painted with swarthy hues. Whatever drapery there is, airily floats behind, and the background is the greenish-gray sky. Cupid and Psyche take their places in some of the pieces—a pair of chubby children, he with his ordinary wings, she using those of the butterfly, black in one instance, but not the less beautiful. She hands down a basket to him, or he raises the basket to her, and the warm and rich carnation and other colors, so well relieved by the sober ground behind, strongly attract both educated and non-educated eyes. In many of these compositions, whether in a medallion shape, or merely having those unvaried backgrounds, the limbs display the utmost symmetry and grace. There is no need of dwelling here upon the "Sending away of Briseis," the "Battle of the Issus," "Bacchus and Ariadne," the "Meleager," &c., as they have been already made the subjects of many discourses and essays.

There are curious and tantalizing specimens of art to be met with among the ruins of Pompeii and in modern Italian houses. Sir William Gell, in his "Pompeiana," describes a picture in a chamber near the entrance of the *Chalcidicum*, which, seen from the entrance of the room, presented a town, a tent, and a marriage ceremony; but which, at the distance of three or four feet, consisted of an assemblage of unmeaning blotches. In the chamber of the "Perseus and Andromeda" was a piece filled with a farm-yard, animals, a fountain, and a beggar, which, on a closer approach, resolved itself into a like unintelligible jumble.

The same author thus describes an apartment in the Palazzo Sanizzi at Rieti :—

"The visitor on entering imagines himself in an apartment hung with green damask, and decorated with a profusion of splendid pictures. There are Madonnas and holy families, landscapes, animals, and battle pieces, which recall at the moment the names and works of the most distinguished artists. A further examination on a nearer approach, shows that no one of the objects has any decided form, or outline, or intelligible sign. Not only does the whole collection consist in the representation of pictures, but their seemingly gold frames are merely wooden mouldings roughly painted with ochre, most scantily touched here and there in the prominent parts with gilding to represent the effects of catching lights. Behind each sham picture was nothing but the white wall, and the apparently rich silk hangings consist of a few narrow stripes between the frames, yet the whole has a good effect."

These latter, it must be admitted, are little better than the coarse illusions of the scene-painter.

To those people of taste who have not access to the large works on the subject, Mr. Dyer's book will be very acceptable. It leaves scarcely any circumstance connected with the buried city unnoticed or undescribed. The volume contains about 300 illustrations, which include all the remains of art in colors, bronze, or marble yet discovered. Views are given of the ruins of the principal buildings, and of all the remarkable private dwellings, accompanied by ground plans and perspective views down some of the cleared streets, one of the most curious being that of the Balcony. You see a few people walking down the central narrow hollow way, the footpaths rising more than a foot high on each side, and each balcony intruding over about a third of the space between the walls. When the balcony on the other side was in its place, and the day was hot, the prospect from the entrance of the street must have been pleasant to the heated passenger. The wood-work of this balcony has been replaced by Signor Fiorelli. With most of these views, those

who have access to photographic collections are, of course, familiar.

Domestic implements, charmed necklaces, made up of things sacred to Isis and Osiris, ornaments, pieces of armor, &c., all find a place among the illustrations, and the descriptive portion is as satisfactory as a thorough acquaintance with the locality, added to access to the best works on the subject, can make it.

Let the man of sensuous temperament, who yet desires to save his soul alive in the end, pay a visit to the remains of the Campanian city and of its once indwellers. He sees about him redundant evidence that it was their chief study to make this fleeting existence not only tolerable, but grossly and systematically enjoyable, with no care for an existence beyond the tomb. Thus lived its last inhabitants, and thus they labored to make a little paradise for themselves on earth. For eighteen centuries their bodies have been dust. What has been for that long period the condition of their immortal part, and what shall it be for eternity!

• • •
Bentley's Miscellany.

THE GARDEN OF EDEN.

AFTER MR. CHRISTIAN RASSAM, CONSUL AT
MOSUL.

WE have before called attention to the translations of the Old Testament as propounded by Mr. Christian Rassam, consul at Mosul. Mr. Rassam's claims to consideration are founded not only upon his being a good Hebrew and Arabic scholar, but upon the fact of his being a native Chaldean, and so thoroughly versed in the different ancient and modern Arabic dialects, that he looks upon the Hebrew itself as merely one of these, and he finds that in these different dialects the natives have, in many instances, so altered the meaning of words by transposition of letters, and of words themselves, as we have before attempted to explain, that the Septuagint were not always aware of these changes, nor, indeed, could any one be expected to be so who was not as familiar with the old Himyaritic, Hadramitic, Kufic, and other Arabic idioms, as with the Hebrew itself.

Questions of such vast extent and

such deep interest are suggested by the Biblical history of creation, that we are sure, without in any way asking or expecting the reader to adopt Mr. Rassam's version in toto, he will still be glad to see that it is possible to give a different version from the one generally accepted of some verses in the all-important chapter of Genesis in which the History of Creation is continued and the Garden of Eden is depicted.

Mr. Rassam reads the first verse simply as follows:—

"And the heavens and the earth were completed, and whatsoever appertains to them."

The authorized translation has "all the host of them." That is, according to Bishop Beveridge, "of each of them." The word "host" is plainly used to signify every thing that is in heaven or in earth; or, as we say, in the whole world, which in Hebrew is always expressed by these two words, "heaven and earth." "The several creatures are called 'host,' or *army*," says Bishop Patrick, "because of their vast quantity and excellent order."—(See D'Oyley and Mant's Holy Bible.) But if creatures comprised the creations of heaven and earth, the word would seem to be misplaced, unless used not in the sense of a being created, but of any thing created. The word "host" seems to have been adopted simply for elocutionary or rhetorical purposes.

2. "And on the seventh day, God ceased His marvellous work, which He did, and rested on the seventh day from all His marvellous work which He did."

The construction here is not quite what is desirable; but admitting the exceeding beauty of the authorized version, we have left Mr. Rassam's rendering in all its simplicity. Bishop Patrick pointed out that in the authorized version it ought to have been "had ended," for God did not work on the seventh day. Mr. Rassam's version meets this difficulty, and according to Dr. Wells's translation of the Septuagint, it is precisely the same as Mr. Rassam's, only "which He did," is rendered "which he had made."

3. "And God blessed the seventh day and made it holy, because He rested on it from all His marvellous work which He created then for His glorious renown."

It is evident that the translators were not more satisfied with the clearness of this last passage than the reader will probably be with Mr. Rassam's version. "Which God created and made" has a marginal reference to the effect that in Hebrew it is "created to make." But if Mr. Rassam's version be correct, the sense of the passage would be, "which God created to his glory and renown," and which would be a great improvement, at the same time that there is nothing obscure about it.

4. "These are the creations of the heavens and earth in succession."

5. "In these days the Lord God created the earth and the heavens and the shrubs of the uncultivated lands which God caused to grow on the earth, and all the plants of the uncultivated land grew up with rapidity, yet the Lord God had caused no rain to fall on the earth, neither had Adam cultivated the soil."

Here Mr. Rassam makes a new division of verses. "In the day" is read by Bishop Patrick as "at the time." Mr. Rassam writes "in these days." The other deviations are not important.

6. "And the tide rose above (or over) the land, and watered all the face of the land."

"There went up a mist from," or in the marginal reading, "a mist which went up from."

7. "And the Lord God created Adam from the dust of the earth and breathed into his nostrils the breath of life, and Adam became a living soul."

The authorized version has "man" for "Adam," the two words signifying the same thing in Persian and in some dialects of the Arabic, and "dust of the earth" for "dust of the ground," or as Bishop Patrick puts it, "not dry, but moist dust or clay; such as is used by potters: as the Greek and Hebrew words are thought most properly to signify." This view of the subject would also agree best with what preceded.

8. "And the Lord God planted a garden near the tide [the Shatt ul Arab] on the east side, and He placed there Adam, whom He had created."

"Eastward" in the authorized version is read by both Bishop Patrick and Dr. Wells as eastward of Judea or of the desert of the Amorites, where Moses wrote these books. This would be the

case with the Shatt ul Arab, which is the tidal estuary of the rivers Euphrates, Tigris, Kirkah or Hawisah (Choaspes), and Karun (Eulaeus).

9. "And out of the ground made the Lord God to grow every tree that is pleasant to the sight and good for food, and the tree of life also in the midst of the garden, and the tree of knowledge of good and evil."

The commentators have described the tree of life as a type of heaven and as a sacrament, being the emblem of life here and hereafter. This tree is one of the most conspicuous ornaments of Assyrian sculpture, and it is universally recognized in Eastern systems of theology. The tree of knowledge of good and evil was, according to Dr. Hales, the appointed test of the obedience or disobedience of our first parents.

10. "And a canal proceedeth from the tide to water the garden, and from thence the tide [Shatt ul Arab] is divided and formed into four heads."

It would seem, says Dr. Hales, that paradise lay on the confluent stream of the rivers Euphrates and Tigris (Shatt ul Arab); but principally on the eastern bank. If such were the case, it is more consonant with the existing state of things that a canal should have been derived from this tidal estuary to water the garden than that a river should have gone forth out of Eden to water the garden, as we read in the authorized version. Dr. Hales also describes the estuary as dividing into two branches above the garden and two more below it.

11. "The name of the first Pishun (Karun) which traverses the whole land of Hawila (Hawaz) where there is gold."

12. "And the gold of that land is good, and there are lead and precious stones."

The Pishun has been regarded by Bishop Patrick and Dr. Wells as the westerly branch by which the Euphrates emptied itself into the Persian Gulf. In actual times, the Shatt ul Arab has no Pasitigris or westerly branch, but an easterly one, one of the mouths of Karun, which is united to the Shatt ul Arab by the Muhammrah canal. This error had its origin in Hawisa, or Havilah, being looked upon as the eastern tract of Arabia Felix, instead of part of Susiana. That the generations of Ishmael

should have been described in Gen. xxv-18, as dwelling "from Havilah unto Shur, that is, before Egypt," is more descriptive of their occupying all the territory from the delta of the Euphrates to the borders of Egypt, than that the eastern limit of the Israeliite Badawin should, as Foster has argued, have been the territory of Hagar or Bahrain, on the Persian Gulf.

The reader of Mr. Rassam's version, "and a canal proceeded from the tide to water the garden," will be reminded of the description of Wisdom by the son of Sirach: "I came forth as a canal dug from a river, and as a water-pipe (or channel) into a paradise." The identification of Havilah with Chwala on the Caspian sea, and the supposition that it is a general name for India, are little more worthy of consideration than the identification of the Pishun with the Ganges, the Indus, the Phasis, the Kur, or the Halys. That a river should be divided into four heads, or sources of new rivers, is, a writer in the "Cyclopaedia of Biblical Literature" remarks, naturally impossible. It is, therefore, questionable if, instead of adopting the more generally accepted reading of a river parted from the garden of Eden with four heads or sources, we should not read with Mr. Rassam that the tide was divided and formed into four heads, or four estuaries, distinct from the main estuary—the Shatt ul Arab.

The city of Hawaz was once both great and prosperous. It is described in the Tuhfat ul Alim as "one of the largest cities of the earth." Its extent was estimated at the time of the Abbasside khalifs at forty parasangs! These khalifs named the city "the source of food and wealth;" the inhabitants of which, "in their riches and luxury, excelled the rest of the world." It may be in allusion to this ancient prosperity of the place that reference is made to its gold as being good, or it may be to the river having brought down gold in its bosom from the mountains, and having in its time been a Susianian Pactolus. Mughairah ben Sulaiman, quoted by Yakut in his "Mujem al Buldan," says of the land of Hawaz, that "it is copper which produces gold." As to lead, we have no notices of its existence on the Karum; but as that river flows through

the lofty chain of Luristan, it may be met with in its upper part. The translation of bedolach, or bdellium, supposed by some to be a species of gum, by others pearls or precious stones, is, however, by no means satisfactory. (See Bdellium in Cassell's Bible Dictionary.) It is curious that Captain Robert Mignan, in his "Memoir on the Ruins of 'Ahwaz," printed in the second volume of "Transactions of the Royal Asiatic Society," alludes to the coins and gems found at that place, as also to the intaglios on cornelian or Oriental onyx. (Travels in Chaldæa, p. 293.)

Mr. Rassam, it is to be observed, is by no means the first to identify the land Havilah with Khuzistan. Bishop Patrick and Dr. Wells, speaking of Athiopia, remark, "Not the country so called in Africa, but another in Asia, adjoining to the easterly mouth of Euphrates, called in the Hebrew, as in the margin of our translation, Cush; by the Greeks and Latins, Susiana; and now called by the Persians, Chusistan, that is, the province of Chus."

13. "And the name of the second river is Gihun, which traverses the whole land of Persia. (Luristan and Khuzistan.) "The same is it that compasseth the whole land of Ethiopia" in the authorized version, but in the margin, it is said, the Hebrew is Cush.

Mr. Rassam in a similar way translates "Tirhahak, King of Ethiopia," "Tirhak, King of Persia," in Isaiah, xxxvii. 9. There can be no question but that several countries are alluded to in the Old Testament, under the name of Cush or Kush—that of the eldest son of Ham; and hence while Bochart maintained (Phaleg, iv. 2) that it was exclusively in Arabia, Gesenius held with no less pertinacity that it was in Aethiopia, as in most translations of the Bible. Others again, as Michaelis and Rosenmüller, have supposed that the name Cush was applied to tracts of country both in Arabia and Africa. As the Cushite tribes emigrated a good deal, there cannot be any question as to there having been Aethiopia as well as Asiatic Cushim. The Cush described in Ezekiel (xxix. 10), as lying to the south of Egypt, would appear to have been the country afterwards called Sabaea and Meroë. But if there is one region which more than

another can lay claim to having been the original Cush, it would be that mentioned as coeval with the Garden of Eden, and which was known to the Arabian and Persian geographers as Khuz, or afterwards Khuzistan, euphonised by the Greeks into Susiana. These Oriental geographers knew not the origin of the word, and several ridiculous suggestions are made upon the subject in Yakut's well-known "Mujem al Buldan." The name is said to signify pig, and was said to have been earned from the ugliness of the people. An ancient King of Persia is described as having written to one of his satraps to send him the worst thing in the world upon the vilest of animals, led by the most disreputable of men, and the satrap sent the salted head of a fish upon an ass, led by a native of Khuzistan. The Kirkah or Hawizah is one of the most remarkable rivers of Khuzistan, and it is that which Mr. Rassam identifies with the Gihun. Gihun and Pishun were, indeed, names used in the ancient Oriental languages as appellatives of rivers generally, like the old British Avon. Sir Henry Rawlinson found the sources of the Kirkah in the Alwand, near Hamadan, and he traced the river past Bisutun, to within a mile and a half of the great mound of Susa, it receiving several tributaries in this long course. The Karun is supposed to represent the Eulaeus of the Greek and Roman geographers: the Kirkah or Hawizah, the Choaspes.

There Susa, by Choaspes's amber stream,
The drink of none but kings.

Agathocles also speaks, as well as Milton, of a river in Persia called "The Golden," of which none drink except the king and his eldest son. But this may refer to the Karun, which has prior claims to the epithet of "golden," here conferred upon it. The waters of the Kirkah and of the Karun are also almost equally renowned for their excellence. Hawaizah upon the Hawizah is considered as the capital of the province of Arabistan. It is a walled town with a citadel and garrison, but has fallen into decay ever since 1837, when the dam gave way, and the river divided itself into innumerable small streams, and was lost in extensive marshes. (Lay-

ard. Description of Khuzistan, in *Journ. of Roy. Geo. Soc.*, vol. xvi. p. 35.)

14. "And the name of the third river is Hidakal, which runs at the east of Assyria; and the fourth river is Euphrates." In the authorized version: "And the name of the third river is Hiddekel; that is which goeth toward the east of Assyria (or in the margin, eastward of Assyria). And the fourth river is Euphrates." (Pirath or Phrath.)

Luckily there is little or no difference of opinion in regard to the identification of these two rivers. In Zend, the Tigris is called Tigir; in Pehlvi, Tigira; whence have arisen both the Aramaean and Arabic forms of Digla and Diglat, and to them we may also trace the Hebrew Dakal, divested of the prefix Hid. This prefix denotes rapidity, so that Hid-dakal signifies the rapid rapid. Tigir by itself denoting rapidity. In the language of Media, Tigris meant "an arrow" (Strabo, ii. 527. Plin., vi. 27). Hence arose such pleonasm as Hid-dakal, like King Pharaoh and Alcoran.

A difficulty, however, has been found in the geographical notice, that it "floweth towards the east of Asshur," or Assyria, for Assyria lay east, not west, of the Tigris. Some, as Gesenius, suppose that Mesopotamia was meant. Others, as Bishop Patrick and Dr. Wells, argue that "toward or before" was meant, and that the river ran "before" Assyria; but Sir Henry Rawlinson's version that the river ran eastward to Assyria—that is, looking upwards from the Shatt ul Arab—is most consonant with the views here advocated of the position of Paradise on the estuary of the Euphrates, Tigris, Choaspes, and Eulaeus.

It is to be remarked that the estuary of these four rivers presented a great difference in early historical times to what it does in the present day, and therefore differed still more in antediluvian times. The extent to which the diluvial deposits can be supposed to have affected the contour of the delta of the Euphrates, Tigris, Choaspes, and Eulaeus, and more especially the land of Shinar, and the first settlements of the families of men after the Deluge, has been discussed at length in "Ainsworth's Researches in Assyria," &c. A distinguished writer, Mr. Granville Penn, has

proposed to sweep away the difficulties by denying the authenticity of the Biblical record from verse 11 to 14 ("Comparative Estimate of the Mineral and Mosaical Geologies," p. 418); but laying aside that the passage cannot be regarded as an interpolation without violating all the principles of just criticism, there is no necessity whatsoever for any such a supposition. Whatever was the condition of the great estuary in antediluvian times, the Euphrates and Tigris having their sources beyond Taurus, in Armenia, and the Choaspes and Eulaeus beyond the Kurdistan mountains, in Persia, they existed as rivers, and emptied themselves into the estuary at points to be determined by the extent of the diluvium in the delta of the four rivers, and the progress of subsequent alluvial deposits as determined by the position of known historical sites, at one epoch at or near the estuary, and now at known or determinable distances from it.

The names, however, given to the countries watered by these rivers, as those of Cush and Havilah, were penned by Moses at an after period, for Cush and his son Havilah were not in existence at the time of the creation of the Garden of Eden.

The numerous attempts of modern German writers to resolve this part and all the rest of the Mosaic archeology into what they call a Mythic Philosophaeme (an allegory made up of tradition and fancy) are, as a writer in the Cyclopaedia of Biblical Literature justly remarks, "full of arbitrary assumptions and inconsistencies; their tendency and design are to undermine all the facts of supernatural revelation, to destroy the authority of the Mosaic and the prophetical Scriptures, and consequently of the Christian, and thus eventually to supersede all religion that rests upon any other ground than egotistical reasonings and romantic fancies. They form a great part of a multifarious scheme of infidelity and pantheism, which requires to be met by the proofs of the existence of a personal, intelligent, and efficient God, and the evidences that He has bestowed upon man a positive manifestation of his authority and love."

There is, however, nothing in the scriptural record to the effect that God

planted a garden to the eastward, on what was then a tidal estuary, as the home of our first parents; that that garden was watered by a canal drawn from the said tidal estuary, and that the same estuary divided into four heads—the Euphrates, the Tigris, the Choaspes, and the Eulaeus—that demands any assumptions or inconsistencies, that appeals to anything miraculous or supernatural, or that requires either egotistical reasonings or romantic fancies.

15. "And the Lord God conducted Adam and placed him in the garden which is on the border of the tide, that he may labor it and plant it."

In the authorized version it is "the garden of Eden;" and in further illustration of the same point we may quote Gen. iii. 24: "So He drove out the man; and He placed at the east of the garden of Eden cherubims, and a flaming sword which turned every way, to keep the way of the tree of life," which is rendered by Mr. Rassam, "He (God) turned Adam out, and He placed at the east side of the garden, which is at the side of the tide, guards to repel with a sword those who were intrusive and who insisted upon finding out the way of the tree of life." Elsewhere Mr. Rassam gives another version to the Eden of the Holy Writ. Thus, Isaiah xxxvii, 12: "Have the gods of the nations delivered them which my fathers have destroyed, as Gozan and Haran and Rezeph, and the children of Eden which were in Telassar." He translates, "Could the gods of the Arabs save them, namely, the tribe of Ghassan and Harin and Radhaf, and the men of Ghadan who are of the hill (tel) of Abshair." The Eden here, as also that mentioned in Ezek. xxvii. 23 as being among the merchants of Tyre, are admittedly differently spelt, and to belong to a different region to the garden of Eden. (See Cassell's "Bible Dictionary," Art. Eden.)

It is impossible, however, without further testimony to give up the name of Eden, which is the most ancient and venerable name in geography, the name of the first district of the earth's surface of which human beings could have any knowledge, and supplant it by "tidal estuary." Other passages scarcely countenance this version, as "He will make her wildernesses like Eden, and her desert

like the garden of Jahvah or Jehovah." "Thou hast been in Eden, the garden of God." "All the trees of Eden that were in the garden of God envied him." "This land which was desolate is become like the garden of Eden" (Isa. li. 3; Ezek. xxviii. 13; xxxi. 9, 16, 18; xxxvi. 35; Joel ii. 3).

The word Eden is explained by Firuz-Abadi in his celebrated Arabic Lexicon (Kamus) as signifying delight, tenderness, and loveliness, and Major Wilford and Professor Wilson find its elements in the Sanscrit. The description throughout, it has been observed, is given in that simple, artless, childlike style which characterises the whole of the primeval Hebrew Scriptures. This is the style which was alone adapted to the early stages of the human history. Whether, then, we regard Eden as a tract of country or as a tract watered by a tidal estuary, and therefore in such a country fertile without labor, still Paradise or the garden was not Eden so much as in Eden. That a river or canal went out of an estuary to water the garden is, further, more consonant with the state of things as existing on the Shatt ul Arab than that "a river proceeded from the country of Eden," and that the tidal estuary had four heads is more comprehensible than that the river of Eden was divided into four heads.

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Selected.

THE DOVE.

UPON the "pallid bust of Pallas" sat
The Raven from the "night's Plutonian shore;"
His burning glance withered my wasting life;
His ceaseless cry still tortured as before:
"Lenore! Lenore! ah! never—nevermore!"

The weary moments dragged their crimson sands
Slow through the life-blood of my sinking heart.
I counted not their flow; I only knew
Time and Eternity were of one hue;
That immortality were endless pain
To one who the long lost could ne'er regain—
There was no hope that Death would Love restore;
"Lenore! Lenore! ah! never—nevermore!"

Early one morn I left my sleepless couch,
Seeking in change of place a change of pain.
I leaned my head against the casement, where
The rose she planted wreathed its clustering flowers.
How could it bloom when she was in the grave?
The birds were carolling on every spray,
And every leaf glittered with perfumed dew;
Nature was full of joy, but, wretched man!
Does God indeed bless only birds and flowers?
As thus I stood—the glowing morn without,

Within, the Raven with its blighting cry,
All light the world, all gloom the hopeless heart—
I prayed in agony, if not in faith;
Yet still my saddened heart refused to soar,
And even summer winds the burden bore:
“Lenore! Lenore! ah! never—nevermore!”

With these wild accents ringing through my heart,
There was no hope in prayer! Sadly I rose,
Gazing on nature with an envious eye,
When lo! a snowy Dove, weaving her rings
In ever-lessening circles, near me came;
With whirring sound of fluttering wings, she passed
Into the cursed and stifling, haunted room,
Where sat the Raven with his voice of doom—
His ceaseless cry from the Plutonian shore:
“Lenore! Lenore! ah! never—nevermore!”

The waving of the whirring, snowy wings,
Cooled the hot air, diffusing mystic calm.
Again I shuddered as I marked the glare
Which shot from the fell Raven's fiendish eye,
The while he measured where his pall-like swoop
Might seize the Dove as Death had seized Lenore;
“Lenore!” he shrieked, “ah, never—nevermore!”

Hoveted the Dove around an antique cross,
Which long had stood afront the pallid bust
Of haughty Pallas o'er my chamber door:
Neglected it had been through all the storm
Of maddening doubts born from the demon cry
Re-echoing from the night's Plutonian shore:
“Lenore! Lenore! ah! never—nevermore!”

I loved all heathen, antique, classic lore,
And thus the cross had paled before the brow
Of Pallas, radiant type of Reason's power.
But human reason fails in hours of woe,
And wisdom's goddess ne'er reopes the grave.
What knows chill Pallas of corruption's doom?
Upon her massive, rounded, glittering brow
The Bird of Doubt had chos'n a fitting place
To knell into my heart forever more:
“Ah! never, nevermore! Lenore! Lenore!”

The Raven's plumage, in the kindling rays,
Shone with metallic lustre, sombre fire;
His fiendish eye, so blue, and fierce, and cold,
Froze like th' hyena's when she tears the dead.
The sculptured beauty of the marble brow
Of Pallas glittered, as though diamond-strewn:
Haughty and dazzling, yet no voice of peace,
But words of dull negation darkly fell
From Reason's goddess in her brilliant sheen!
No secret bears she from the silent grave;
She stands appalled before its dark abyss,
And shudders at its gloom with all her lore,
All powerless to ope its grass-grown door.
Can Pallas e'er the loved and lost restore?
Hear her wild Raven shriek: “Lenore! no more!”

With gloomy thoughts and threnging dreams
Oppressed,
I sank upon the “violet velvet chair,
Which she shall press, ah, never, nevermore!”
And gazed, I know not why, upon the cross,
On which the Dove was resting its soft wings,
Glowing and rosy in the morn's warm light.
I cannot tell how long I dreaming lay,
When (as from some old picture, shadowy forms

Loom from a distant background as we gaze,
So bright they gleam, so soft they melt away,
We scarcely know whether 'tis fancy's play
Or artist's skill that wins them to the day)
There grew a band of angels on my sight,
Wreathing in love around the slighted cross.
One swung a censer, hung with bell-like flowers,
Whence tones and perfumes mingling charmed

the air;
Thick clouds of incense veiled their shadowy
forms,
Yet could I see their wings of rainbow light,
The wavings of their white arms, soft and bright.
Then she who swung the censer nearer drew—
The perfumed tones were silent—lowly bent
(The long curls pouring gold adown the wings),
She knelt in prayer before the crucifix.
Her eyes were deep as midnight's mystic stars,
Freighted with love they trembling gazed above,
As pleading for some mortal's bitter pain:
When answered—soft untwined the clasping
hands,

The bright wings furled—my heart stood still to
hear

“The footfalls tinkle on the tufted floor”—
The eyes met mine—O God! my lost Lenore!
Too deeply awed to clasp her to my heart,
I knelt and gasped—“Lenore! my lost Lenore!
Is there a home for Love beyond the skies?
In pity answer!—shall we meet again?”
Her eyes in rapture floated; solemn, calm,
Then softest music from her lips of balm
Fell, as she joined the angels in the air!
Her words forever charmed away despair!

“Above all pain,
We meet again!

“Kneel and worship humbly
Round the slighted cross!
Death is only seeming—
Love is never loss!
In the hour of sorrow
Calmly look above!
Trust the Holy Victim—
Heaven is in His love!

“Above all pain,
We meet again!

“Never heed the Raven—
Doubt was born in hell!
How can heathen Pallas
Faith of Christian tell?
With the faith of angels,
Led by Holy Dove,
Kneel and pray before Him
Heaven is in His love!

“Above all pain,
We meet again!”

Then clouds of incense veiled the floating forms;
I only saw the gleams of starry wings,
The flash from lustrous eyes, the glittering hair,
As chanting still the *Sanctus* of the skies,
Clear o'er the *Misereres* of earth's graves,
Enveloped in the mist of perfumed haze,
In music's spell they faded from my gaze.
Gone—gone the vision! from my sight it bore
My lost, my found, my ever loved Lenore!

Forgotten scenes of happy infant years,
My mother's hymns around my cradle-bed,
Memories of vesper-bell and matin chimes,
Of priests and incensed altars, dimly waked.
The fierce eye of the Raven dimmed and quailed,
His burnished plumage drooped, yet, full of hate,
Began he still his "wilderling shriek—“Lenore!”
When, lo! the Dove broke in upon his cry—
She, too, had found a voice for agony;
Calmly it fell from heaven's cerulean shore:
“Lenore! Lenore! forever—evermore!”

Soon as the Raven heard the silvery tones,
Lulling as gush of mountain-eradled stream,
With maddened plunge he fell to rise no more,
And, in the sweep of his Plutonian wings,
Dashed to the earth the bust of Pallas fair.
The haughty brow lay humbled in the dust,
O'ershadowed by the terror-woven wings
Of that wild Raven, as by some dark pall.
Lift up poor Pallas! bathe her fainting brow
With drops of dewy chrism! take the beak
Of the false Raven from her sinking soul!
Oh, let the Faith Dove nestle in her heart,
Her haughty reason low at Jesus' feet,
While humble as a child she cons the lore:
“The loved, the lost, forever—evermore!”

As if to win me to the crucifix,
The Dove would flutter there, then seek my
breast.

The heart must feel its utter orphanage,
Before it makes the cross its dearest hope!
I knelt before the holy martyred form,
The perfect Victim given in perfect love,
The highest symbol of the highest Power,
Self-abnegation perfected in God!
Circling the brow like diadem, there shone
Each letter pierced with thorns, and dyed in
blood,

Yet dazzling vision with the hopes of heaven:
“I AM THE RESURRECTION AND THE LIFE!”
Upon the outstretched hands, mangled and torn,
I found that mighty truth the heart divines,
Which strews our midnight thick with stars,
solves doubts,
And makes the chasm of the yawning grave
The womb of higher life, in which the lost
Are gently rocked into their angel forms—
That truth of mystic rapture—“GOD IS LOVE!”

Still chants the snowy DOVE from heaven's shore:
“LENORE! LENORE! FOREVER! EVERMORE!”

Chambers's Journal.

IN THE JEWEL-GARDEN.

WHEN our old friend of the *Arabian Nights*, Aladdin, is down in the subterranean jewel-garden, with his dear uncle the African magician awaiting him with the worst intentions at its adit, he is much disappointed with the fruit upon the trees. “Each tree bore fruits of a different color. Some were white, others sparkling and transparent; some were red, and of different shades; others

green, blue, violet; the deep red were rubies; the paler, a particular sort of ruby called balass; the green, emeralds; the blue, turquoises; the violet, amethysts; those tinged with yellow, sapphires: and the whole of them,” continues the narrative in that stupendously gorgeous way which is its charm, “were of the largest size, and more perfect than were ever seen in the whole world.” They did not, however, suit Aladdin's taste one bit more than those effigies of fruit, in stone or soap, which sometimes adorn the mantel-pieces of lodging-houses, and the poor lad “would have much preferred to them the figs and grapes common in China.” Now, the British (and indeed every other) public is in much the same state of ignorance of the genuineness and value of precious stones as was Aladdin; only their misconception commonly exaggerates instead of depreciates what they happen to have in their possession; and — *omne ignotum pro magnifico*—they take their Cairngorm for a fine specimen of the Diamond, which, if it was a diamond at all, it would probably be. The well-known Mr. Henry Emmanuel, penetrated with the sense of this universal lack of knowledge concerning the merchandise in which he deals, has favored the world with a book upon “the history, value, and distinguishing characteristics” of all precious stones, “with simple tests for their identification;” and a very interesting book it is. He takes, of course, the practical view of the subject, but borrows his illustrations of it from all sources, so that the work combines the advantages of a trade hand-book and of a volume of romance.

No matter how we may despise the barbaric magnificence of jewels, and even, as mere ornaments of our Beloved One, prefer the “one white rose in her hair” to any amount of diamonds (especially if we have to purchase them), still “this hoarded and time-honored wealth” must always possess a peculiar interest. Any sudden and considerable change in the supply or demand of precious stones would affect property more than the alteration in value of any other thing save Gold; and, in their turn, their worth is affected by changes in politics. “In Paris, during the first Revolution, diamonds doubled their previous value;

and even now, in foreign countries, many personages of note make a practice of keeping them in their possession in case of emergency." Of late years, the tendency has been toward a rise ; yet one of a peculiar sort. The small stones are much dearer, but not the rarer specimens. Many more people buy jewels than did so a hundred years ago ; but the number of persons able and willing to invest the sum of money required for the purchase of large stones has not increased in the same proportion. The value of diamonds is, however, still *based* upon the old calculation, that "it rises in value in proportion to its weight, in the ratio of the square of its weight : thus, supposing the value of a one-carat diamond [4 grains=1 carat] be L.8, one of two carats will be $2 \times 2 \times 8 = \text{L. } 32$." But, of course, there is no trade in which the term Fancy Price occurs so often as in the jeweller's. The Nassac diamond, taken by the Marquis of Hastings at the conquest of the Deccan, and sold to Rundell and Bridge by the East India Company, was originally valued at thirty thousand pounds, yet fell to Lord Westminster at the auction-mart for seven thousand pounds.

Precious stones are found all over the globe, but the tropical countries are most prolific in them : "it would seem as if the places where the sun shines with most splendor produce the most gems ; and perhaps the volcanic changes to which they are subject may have something to do with the matter." They occur in profusion ; but not the flawless specimens. The requisite attributes to command a great price are many and various. Transparency, brilliancy, lustre, and the freedom from defects are insufficient, unless there is also the exact quantity of coloring matter to furnish the desired tint. Well may our author remark that the result of searching for diamonds "appears hardly commensurate with the toil, when the product of the yearly labor of five hundred men (in the mines of Bahia) can be readily carried in the hand." The component parts of every gem are sufficiently well known, and they can be separated into them ; but not all the researches of learned chemists have succeeded in producing them by artificial means. They are far from attractive-looking in their

natural state. Our phrase "rough diamond" is aptly applied enough, for "a diamond in the rough would be thrown away as a worthless pebble ; and the same may be observed of other precious stones."

"The true nature of the diamonds found in the Brazils was long unsuspected, and they were thrown away, or used as counters for card-players ;" but when it got to be known, the government took forcible possession of the land where they were found, and declared the diamond-trade a monopoly, and themselves the exclusive proprietors. The yield during the first fifty years was so enormous that it reduced the value of diamonds all over the world by one-half. It was the veritable Tom Tiddler's Ground. "Mere gold was abandoned to the slaves, as unworthy of attention. Children, after the rains, collected the grains of it which lay strewn over their path. The crops of all fowls killed were carefully examined, and often found to contain diamonds. [The Goose with the Golden Eggs would have been treated with scorn.] A negro once found a stone of five carats adhering to the roots of a cabbage he had plucked for dinner." Think of looking for a cabbage, and finding five carrots sticking to it ! This excessive harvest of wealth has long ceased. The most productive district, at the present time, is that of Matto Grosso, in the vicinity of the town of Diamantina. "When a slave finds a diamond of eighteen carats, he receives his freedom, and is led, crowned with flowers, to the proprietor ; while, for smaller stones, proportional rewards are given." Thefts, however, are very common ; "sometimes the slave, under the very eye of the overseer, conceals a stone in his hair, mouth, or ears ; sometimes between his fingers or toes ; and they have even been known to throw stones away, in the hope of finding them again after nightfall."

Most precious stones, like human beings, will scratch one another ; but sometimes, unlike them, they will refuse to perform that kindly office. This peculiarity affords one of the best tests of their true nature. Thus, supposing it were wished to ascertain what gem a white stone was ; by following the rules laid down by Mr. Emmanuel, we should

know that if it were scratched by a sapphire, it could not be a diamond; and if it scratched glass, it must necessarily be a beryl, or quartz, or rock-crystal. Again, if its specific gravity were less than 3·9, it could not be a ruby or a sapphire; and if it did not acquire electricity by heat, it could neither be a topaz nor a jargoon. For the purpose, therefore, of satisfying his mind, all that is necessary for Aladdin to procure is a crystal of sapphire (cheap and easily obtained), a piece of quartz or rock-crystal, a piece of hard flint-glass, and a pair of scales, for the purpose of taking the specific gravity. Then the African magician himself could not cheat him. But all kinds of frauds abound in this costly trade. There are "doublets" of which "the under part is glass joined artistically, without cement; or sometimes the top is sapphire, and the under part a gem of less value, such as garnet." Some stones have the interior of their setting enamelled or painted, to throw a tint of color into the gem; and diamonds have the inside of their setting of polished silver, to correct a yellowish tinge. Even in the countries where the real gems are produced, you are subject to deception. Blue glass cut into facets is exported from Birmingham and Paris to Colombo, for the Cingalese to dispose of to the passengers by the Peninsular and Oriental steamers. Mr. Emmanuel hopes that this intelligence may put folks on their guard, and also that the information he otherwise affords may prevent persons residing in foreign countries sending home worthless pebbles, under the impression that they are priceless gems. In one instance, a man actually left his business, and, at a very considerable expense, came to this country to sell a quantity of diamonds, which turned out to be nodules of rock-crystal. It is quite probable such persons are great pests to jewellers, and always fancy they are being cheated by them. Lapidaries themselves, however, are sometimes deceived. "A noble lady in this country formerly possessed a sapphire, which is perhaps the finest known. She sold it, however, during her lifetime, and replaced it by an imitation, so skilfully made as to deceive even the jeweller who valued it for probate-duty: it was estimated at ten thousand pounds, and

the duty paid on it by the legatee, who was doubtless chagrined when he discovered the deception."

Mr. Emmanuel does not confine himself to exposing modern deceits: he lays bare with hands as remorseless as Niebuhr's, the falsehoods of the Past. Even such a fine old story as Cleopatra's pearl is not respected by his profane intelligence. A pearl of the magnitude which has been ascribed to it, could never, he says, have been dissolved in vinegar, but would have required a much stronger acid, such as would have destroyed not only the Egyptian lady's teeth, but her existence. Perhaps the gipsy humbugged her Roman lover with a false pearl (such as we learn are made of fish-bones), and was not so extravagant as she appeared to be. It was easy in those days to deceive persons about precious stones, for little was known of them, and everything was credited. Serapius ascribed to the Diamond the power of driving away "incubus and succubus;" but on account of our ignorance of the nature of these objects, we cannot form a judgment as to whether this was an advantage or the reverse: *suckabobs* we used, as children, to consider rather nice. The ruby, according to Boëthius, was a sovereign remedy against poison. The jacinth produced sleep. The emerald, by changing color, indicated false witnesses. The sapphire procured favor with princes (which seems likely enough), and the chrysolite (also likely) assuaged wrath. The twelve apostles were each symbolized by a precious stone—Peter by jasper, John by emerald, and so on.

Of the twelve stones in the breast-plate of the high-priest, there was (1) the Sardius (any precious stone of a red hue), among the Jews supposed to be a preservative against the Plague, and among the Arabs an agent for stopping haemorrhage. Hebrew legends state that the *blushing* ruby became the symbolical representative of Reuben. (2) The Topaz: from the island Topazion, supposed to be situated in the Red Sea. (3) The Carbuncle, which, in its Hebrew name Bareketh, signifies "flashing stone." A carbuncle was said to have been suspended—like our gas chandeliers—in the Ark of Noah, where it must certainly have been otherwise

rather dark. This stone was said to drop from the clouds amid the flashes of lightning. (4) Although the *Authorized Version* translates Nophek as emerald, this seems to have been also a carbuncle. Those of superior brilliancy are ungallantly called Males : the inferior ones, Females. (5) Sapphire ; the most favorite precious stone in Holy Writ. The tables on which the ten commandments were engraved are said to have been made of it : it was even supposed to preserve the sight. (6) The Diamond. Of this stone, our author gravely relates : "A noble lady inherited two diamonds, which for many years remained hidden among her treasures ; from time to time these stones gave birth to indisputable fac-similes and likenesses of themselves." They also, like the carbuncles, must, we suppose, have been male and female. The anecdote reminds us of the wit who, inspecting his friend's study, and perceiving that the male and female authors were kept scrupulously apart, remarked : " You do not wish, I see, to increase your library." (7) The Turquoise. This precious stone was also the subject of a precious falsehood. An ancient writer upon it narrates with seriousness : " One of my relatives possessed a turquoise, set in a gold ring, which he wore on his finger. It happened that he was seized with a malady of which he died. During the whole period in which the wearer enjoyed his full health, the turquoise was distinguished for unparalleled beauty and clearness ; but scarcely was he dead, when the stone lost its lustre, and assumed a faded, withered appearance, as if mourning for its master. This sudden change in the nature of the stone made me lose the desire I originally entertained of purchasing it, which I might have done for a trifling sum. However, no sooner did it obtain a new owner, than it regained its former exquisite freshness. I felt greatly vexed that I had lost the chance of procuring such a valuable and sensitive gem." One needs to be an Emerald (or, at least, an Irishman) to credit this little story. (8) The Agate. (9) The Onyx (we follow the Rabbinical writers, not the *Authorized Translation*), which has five variations ; the fifth, black with white stripes, being the most valuable. (10) The Chrysolite. (11) The Emerald.

Workers in precious stones, say the Rabbins, place this stone before them to rest their eyesight upon when engraving minute objects, since it bears so near a resemblance to the refreshing verdure of fields and trees. The best kind of emerald is found in the gold-mines, and is excavated by excessive and painful toil. The griffin is said to build (his or her ?) nest in its vicinity, and to keep a sharp look-out in the way of guarding it. (12) The Jasper. According to tradition, the "Jashpeh" in the breast-plate represents the name of Benjamin. During the existence of the second Temple, this stone, says the Talmud, was lost. Great exertions were made to replace it, and it being ascertained that one Damaben-Nethinah was in possession of a fine specimen, it was purchased for sixty pounds of our money ; an immense price in those times.

Jewels of immense value have been sometimes utterly lost in our own time, which is curious enough, considering the care necessarily taken of them and their comparative indestructibility.* The renowned Blue Diamond disappeared in the French Revolution, and has never been heard of since.† There are said to be "sermons in stones ;" but in each of the principal precious stones lies a gorgeous romance ; and their histories, if written by a competent person, would make a charming volume.

The largest diamond in the world seems to be the Braganza, belonging to the crown of Portugal. It was found in 1471 in Brazil, and weighs eighteen hundred and eighty carats ; but great doubts exist as to its being a genuine diamond. It is imagined to be a white topaz ; but the Portuguese government are much too sagacious to permit it to be examined.

The Mattam Diamond (367 carats, pear-shaped, and indented at the thick end) was found at Landak in Borneo, and has been the cause of a sanguinary war.

* The diamond is not acted upon by any acid, but becomes entirely consumed when exposed to a very strong degree of heat, in connection with the oxygen of the air. After the great fire at Hamburg, many diamonds were sold for trifling sums, which, when repolished, regained their former brilliancy, though with a slight loss of weight.

† Its absence leaves the Hope Diamond the finest blue one in the world.

It still, however, remains in the possession of the Rajah of Mattam. He deems the fortunes of his family to depend upon its retention; and refused two gunboats with stores and ammunition, and fifty thousand pounds in money, offered for it by the Dutch governor of Batavia.

The Koh-i-noor was taken at Delhi by the conquering Ala-ed-Din (some relation of our young friend Aladdin, no doubt, and perhaps his contemporary). Thence it came into the hands of the Great Mogul Baber in 1526. This prince esteemed it at the sum of the daily maintenance of the whole world—a very grand unit of measurement. It was beheld by Tavernier among the jewels of Aurungzebe; but reduced by the unskilfulness of the cutter (who, perhaps, lost his head over so tremendous a job, and nearly lost it afterward very literally) from 793 to 186 carats, the weight it possessed in the Exhibition in Hyde Park. At the capture of Lahore, during the Sikh mutiny, it fell into the hands of the British troops, who presented it to the Queen. This diamond has been recut by the famous Coster of Amsterdam, and reduced to 106 carats, but instead of being a lustreless mass, scarcely better than rock-crystal, it has become a brilliant, matchless for purity and fire.

The Cumberland Diamond, bought by the city of London for ten thousand pounds, and presented to the conqueror of Culloden, was claimed by the crown of Hanover, and has recently been restored to it by the Queen. Perhaps Prussia has laid hands on it by this time.

The Orloff is set in the sceptre of the czars of Russia. It once formed the eye of an idol in a Brahmin temple. (No unusual office for an Eastern jewel, a fact which forms the foundation of Mr. Wilkie Collins's interesting novel, *The Moonstone*.) It is also said to have been set in the famous peacock throne of Nadir Shah. At all events, it was stolen by a Frenchman; and was eventually purchased by the Empress Catharine II., in 1774, for four hundred and fifty thousand roubles, a pension of twenty thousand roubles, and a patent of nobility.

The tale of the Pitt Diamond is his-

torical. It was bought by the Duke of Orleans, Regent of France, of Pitt, the governor of Fort St. George, for one hundred and thirty-five thousand pounds. The stone then weighed 410 carats. Pitt, in a pamphlet published to clear his character, asserts that he purchased it in Golconda; but the couplet of Pope:

Asleep and naked as the Indian lay,
An honest factor stole the gem away,

has probably been more extensively circulated. However, the gem was really stolen from the Garde Meuble in 1792, and restored in a mysterious manner. Its cutting cost three thousand five hundred pounds, and occupied two years. Napoleon I. wore it in the pommel of his sword.

The Florentine Brilliant belongs to the Emperor of Austria. It is supposed to be one of the gems lost at the battle of Grandson by Charles the Bold. It was found by a Swiss soldier, who sold it to a priest for one florin.

The Piggott Diamond was sold by lottery for thirty thousand pounds; afterward bought by Rundell and Bridge for six thousand pounds, and disposed of by them at the original price (no wonder some jewellers are rich!) to the Pasha of Egypt. *The present possessor is not known.*

The value of the ruby much exceeds, when perfect, that of any other gem. A pure brilliant, for instance, of four carats would be worth two hundred and twenty pounds; but a pure ruby, of that vivid pigeon's-blood color which is so highly prized, would fetch four hundred pounds. It all depends on the color, since a pale ruby of the same size might not be worth twelve pounds. There are very few large ones in existence. The king of Burmah is said to possess one as big as a pigeon's egg; but then nobody (who is anybody, in a jeweller's point of view) has ever seen it. However, the ruby-mines of Burmah produce the finest stones, and when a particularly good one is found, a procession of grandees with soldiers and elephants is sent out to meet it. One of the titles of his Burmese majesty is Lord of the Rubies.

Perhaps the reader has been sufficiently dazzled with these splendors. Every page of Mr. Emmanuel's treatise spark-

les with them. We will only speak then of two more precious stones—the blood-stone (or Heliotrope) and the Opal. Concerning the former, there is a curious tradition: "At the Crucifixion, the blood which followed the spear-thrust fell upon a dark green jasper lying at the foot of the cross, and from this circumstance sprang the variety. In the middle ages, the red specks alluded to were supposed to represent the blood of Christ, and this stone to possess the same medicinal and magical virtues as the jasper."

The Opal, beyond doubt the most beautiful of all gems, is also the only one which cannot be imitated. It is impossible to value it, since the price depends solely upon the play of color. A fine specimen will fetch a thousand pounds; but fifty times that sum has been refused in the case of the Vienna Opal. A curious illustration of the power of fiction over fashion is related by our author with reference to this gem. "The hydrophane, or Mexican opal, loses its beauty when exposed to water; and Sir Walter Scott has alluded to this fact in *Anne of Geierstein*, although, in that romance, he ascribes it to supernatural agency. Strange to say, after the publication of the novel, the belief that opals were unlucky obtained such currency, that they quickly went out of fashion."

St. James's Magazine.

ONE HUNDRED PLANETS.

It is probable that before these pages appear the number of known asteroids, or minor planets, will be increased to one hundred. As we write, two are wanting from that number; but scarcely a month has passed lately without adding one of these minute worlds to the planetary system. It would almost seem as if astronomers had been more than usually on the alert of late, on account of the near prospect of entering on the second hundred of the asteroidal family.

The history of the discovery that there exists in space a zone of worlds circling round the sun in interwoven orbits, is one which can hardly fail to be interesting, even to those who have not made astronomy a subject of special study. By a singular accident, this his-

tory belongs wholly to the nineteenth century, the discovery of the first asteroid having been effected on the first day of the century. We propose to discuss some of the more interesting circumstances which have attended the search after new members of the zone of asteroids.

When Copernicus had shown that the planets circle around the sun, and had thus swept away the whole of Ptolemy's complicated system, with its

"Centrics and excentrics scribbled o'er,
Cycle and epicycle, orb in orb,"

astronomers began for the first time to be sensible of the symmetry and orderliness of the planetary system. They saw six beautiful orbs all circling in one direction around a massive central globe; and around one of these orbs—our own earth—they saw a secondary orb, or satellite, revolving in the same direction as the primary planets. Then came the discovery of Jupiter's moons, revolving in symmetrical orbits around the giant of the solar system, and still astronomers saw no change from the law by which all the members of the solar system, satellites as well as primaries, seemed bound to revolve in one direction.

Struck by the order and symmetry thus exhibited within the solar system, the ingenious astronomer Kepler was led to seek for new evidence of symmetrical arrangement, or, as he quaintly expressed it, for new harmonies in the music of the spheres. He quickly noticed a certain evidence of law in the distribution of the planets at various distances from the great centre of the system. He tried many methods—some simple, others complex—for harmonizing the planetary distances, but he was always foiled at one particular point of his inquiry. A gap, which his devices were insufficient to bridge over, appeared to exist between the orbits of Mars and Jupiter. "At length," says he, "I have become bolder, and I now place a new planet between these two"—a happy anticipation of future discoveries, somewhat marred, it should seem, by a guess which has not been confirmed—a supposition, namely, that an unseen planet revolves between the orbits of Mercury and Venus.

A century and a half later, Professor

Titius, of Wittemberg, propounded a singular law of planetary distances, which only required for its completeness the supposition that an unseen planet revolves between Mars and Jupiter. This law, commonly called Bode's law, is usually presented with an array of figures, which leads the beginner to suppose that the law is a complex one. In reality, however, the law is very simple, and may be expressed in few words, thus: *the distances of the successive planets from the orbit of Mercury increase in a twofold proportion.* The law is not fulfilled exactly, but there is an approximation to exactness which is sufficiently remarkable. Thus, according to the law, if we called the distance of the earth from Mercury's orbit *two*, the distance of Venus should be *one*, that of Mars *four*, that of the missing planet *eight*, that of Jupiter *sixteen*, and that of Saturn *thirty-two*. The actual distances are as follows:—That of Venus is *one and a tenth*, that of Mars *three and four-fifths*, that of Jupiter *sixteen*, and that of Saturn *thirty and a half*. Although we recognize the possibility that this approximation may be merely accidental, yet it cannot fail to strike us as involving, at the least, a very singular coincidence.

Here matters remained until the discovery of Uranus by Sir William (then Dr.) Herschel. As soon as the orbit of the new planet had been determined, it was found that its distance corresponds very closely to Bode's law. As Uranus travels outside Saturn's orbit, its distance from Mercury's orbit should be represented by *sixty-four* (on the above-named scale). The actual distance is *sixty-two and two-thirds*. This close agreement attracted much attention to Bode's law, and many eminent astronomers began to attach considerable importance to Kepler's prediction, that between the orbit of Mars and Jupiter there would be found a planet too small to be seen by the unaided eye.

Nearly nineteen years elapsed, however, before any measures were taken to institute a rigid search for the missing body. At length, in 1800, six distinguished astronomers held a meeting at Lilienthal, at which the subject was earnestly discussed. It was finally arranged that the zodiac—that region of

the celestial sphere along which all the planets are observed to move—should be divided into twenty-four belts, which were to be explored by as many astronomers, each astronomer taking a separate zone. The superintendence of the whole process was assigned to the eminent observer Schroeter; and Baron de Lach, to whom the institution of the search was mainly due, was chosen as the president of the new Society of Planet-seekers.

It has often happened in the history of astronomy, that the results of the most carefully organized research have been anticipated by observers not engaged in carrying out the appointed plan of operations. For instance, when all the astronomers of Europe were sweeping the heavens for Halley's comet in 1758, a Saxon farmer—Palisch—anticipated them all by detecting—and that with the unaided eye—the return of the wanderer. Something similar happened in the present instance.

The celebrated Italian astronomer, Piazzi, was engaged in constructing an extensive catalogue of the fixed stars. While prosecuting this work, he was led to examine a portion of the constellation Taurus, in which a certain star (assigned by Wollaston to this region) was missing. For several nights in succession Piazzi prosecuted his inquiry after the missing orb. Whether Wollaston had made a mistake, or whether he had recorded the place of an asteroid which had moved away to other regions of the sky, we shall probably never learn. Certain it is that Piazzi could not detect any star where Wollaston had marked one in. But his search was soon rewarded by a discovery of greater value. On the 1st of January, 1801, he observed a small star, which was not recorded in his own or any other catalogue. On the 2nd he looked again for the star, proposing to determine its place afresh. To his surprise, he found that the star had moved away from the place it had before occupied. The motion was inconsiderable, indeed, but yet he could feel little doubt respecting its reality. On the 3rd he looked again for the stranger, and now there was absolute certainty respecting its motion. Yes, the star was slowly moving from east to west, or, to use a technical ex-

pression, slowly retrograding. This was precisely the sort of motion which would be exhibited by a planet occupying the apparent position of the stranger. But as it was a kind of motion which might belong to a body moving in a very different manner, Piazzi waited for further information. If the stranger were really a planet, *it could not retrograde long, but was bound presently to resume its forward motion.* Why this is so, we need not here stop to explain. Let it suffice to remark that, along certain parts of their paths, the planets seem for awhile to move backwards, just as an advancing train might seem to do if observed by a passenger in a train travelling more rapidly in the same direction. For eleven days Piazzi's star continued to retrograde, but he observed with satisfaction that its motion diminished daily. On the 12th of January it was stationary. Then slowly it began to advance along the zodiac signs.

There was no longer any doubt respecting the character of the stranger; and after watching the star for twelve more days, Piazzi wrote to Bode and Orani, two members of the planet-seeking association, informing them of the nature of his discovery. Unfortunately his letters did not reach them until the end of March, and in the meantime—after tracking the star until the 11th of February—Piazzi was seized with a very dangerous illness, which put a stop to his observations. When Bode and Orani received Piazzi's letters, the newly-discovered planet had become lost to view, having already approached that part of the heavens in which the sun was situated, and being thus lost to sight through the overpowering brilliancy of the solar light.

Nothing remained for the present but to await the re-appearance of the missing orb. Six long months, however, were to elapse, and all this time the stranger would be speeding onward in an orbit of which so little was known, that it seemed all but hopeless that the place of the new planet should be guessed at after so long an interval. In the meantime a rough analysis was made of the stranger's path, and all agreed in the conclusion that Kepler's prediction had really been fulfilled, and that the new planet revolved in an orbit

intermediate between the orbits of Mars and Jupiter. Not only was this found to be the case, but it was shown that the distance of the stranger corresponded very closely with the law which has been stated above.

In September, 1801, the search for the returning planet was commenced. But, as had been feared, it proved unfruitful. Again and again the keenest observers scrutinized those regions of the sky in which the stranger might be expected to appear, but no success rewarded their labors. "The world began to sneer," writes a modern astronomer, "at a science which could find a body in the heavens and then lose it for ever."

Observational astronomy had been tried and had failed—the time had come to apply the powers of physical astronomy. The young astronomer, Gauss, already well-known for his application of new modes of analysis to the computation of cometary orbits, was fired with the ambition of completing by means of computation the tracking process which Piazzi had pursued by actual observation, and had been compelled to leave unfinished.

The attempt was a bold one—almost as bold as that later effort which led to the discovery of distant Neptune. It was successful, however. The long process of calculation was finished a few days before the end of the year 1801; the calculated path of the planet on the celestial sphere was announced to the observers who had been so long unsuccessful in their labors; and on the last day of the year the planet was detected by De Lach close to the place assigned to it by the ephemeris of Gauss. Thus, by a singular coincidence, the discovery of the new planet was the work of exactly one year. Detected on the evening of the first day of the present century, the stranger was finally admitted into the family of planets at the end of the first year of the century. On January 1st, 1802, the new planet was independently re-discovered by Olbers. The name Ceres was assigned to it.

On a careful examination of the orbit of Ceres, a very satisfactory accordance with the anticipations of astronomers was found to result. On the supposition that the earth's distance from the orbit of Mercury is expressed by *two*, the dis-

tance of Ceres should have been *eight*: it is actually *seven and nine-tenths*.

But it was not long before some very anomalous features were observed in the relations presented by the new planet. In the first place, it was found to be a very minute object, not merely in comparison with the primary planets, but even when compared with their satellites. Sir W. Herschel estimated its diameter at only 161 miles; so that the surface of the new world (assuming this estimate to be correct) is considerably less than that of Great Britain. Then, again, the motion of the new planet is not of the orderly nature which is characteristic of the planetary system. It travels in a path which is considerably inclined to that plane in space near which all the other planets are observed to move.

While astronomers were speculating on these peculiarities, a new discovery was effected. The astronomer Olbers, during his search after Ceres, had familiarized himself with the aspect of all the telescopic stars which lie near the path followed by that planet. On the 28th of March, 1802, while examining a portion of this track—a region very near to the spot on which he had detected Ceres three months before—he observed a small star of the seventh magnitude where no star, he felt sure, had been seen by him on any former occasion. Now there is nothing very uncommon in such an observation as this, because there are many stars which only shine out at intervals. Olbers supposed the stranger to be one of these fitful variables; but he thought it well to re-examine the star, after an interval, in order to see whether it had any perceptible motion. He found that it was moving, and continuing his observations he established the fact that the stranger was a planet, on the very evening on which he had first discovered it.

In exactly one month from the discovery of this second planet, Gauss had calculated its orbit. To the surprise of the astronomical world, the stranger was found to be quite as fitting a representative of Kepler's missing planet as Ceres had been shown to be. Its mean distance is nearly the same as that of Ceres; and its dimensions appear to be equally, or perhaps more minute. But the orbit of the new planet presents one or two

peculiarities. It is far more eccentric than that of Ceres, and it departs so widely from the mean plane of the planetary system, that Sir W. Herschel considered the term planet inapplicable to such a body. Hence arose the invention of the name asteroid, perhaps as ill-chosen a term as has ever been adopted by the scientific world.

The circumstance that two planets should be found revolving around the sun at nearly the same mean distance, attracted a great deal of attention among astronomers. In fact, we may look upon the discovery as one of the most remarkable that has ever been effected. For men began at once to see that there exists within the solar system a variety of structure of which they had hitherto had little conception. It is not saying too much to assert that a large proportion of the views at present held respecting the planetary system would have been scouted as *bizarre* and fanciful before the discovery of Pallas. For in astronomy, as in the other sciences, the range of the known limits man's conceptions respecting the unknown.

So strange did the phenomena presented by the two new planets appear, that astronomers were led to suppose that possibly these bodies might be but the fragments of a large planet, which had once revolved, brilliant as Mars or Jupiter, between the orbits of these planets. Men recalled the fanciful views of the ancient astronomer, who spoke of planets which had disappeared from the heavens. Olbers, the discoverer of Pallas, was the first to give form to the new theory. He supposed that some internal convulsion might have rent the massive globe of a primary planet into fragments and hurled these forth with sufficient energy to account for the anomalous motions of the recently discovered bodies. He suggested the possibility that other fragments might be discovered; and he pointed out two parts of the heavens in which the search after such fragments would have the best chance of success.

The views of Olbers were quickly acted upon, and no very long time elapsed before the discovery of a third planet in one of the very regions indicated by Olbers, seemed to confirm his fanciful theory. The new planet, which received the name of Juno, was detected by

Harding, of Lilienthal, on September 2nd, 1804. It appears to be smaller than either of the others, and revolves in an orbit of singular eccentricity.

Confirmed in his views by this discovery, Olbers prosecuted the search after new fragments of his shattered planet with new energy. For two years and a half, however, he sought in vain. At length, on March 28th, 1807, his perseverance met with its reward, in the discovery of the largest known member of the asteroidal family. He was examining the northern wing of Virgo, when his attention was drawn to a brilliant star of the sixth magnitude in a neighborhood with which his long-continued researches had made him intimately familiar. He had never before seen this star, and, therefore, felt convinced that it was a planet. It must be remembered that to a telescopist, sixth magnitude stars hold much the same position as first magnitude stars to the naked-eye observer. They shine out in the field of view just as Arcturus, Aldebaran, or Sirius shine out among the lesser stars on the celestial vault. Therefore, a telescopist who has spent any time in examining a particular region of the heavens, would be as much struck by the discovery of a new sixth magnitude star, as any person familiar with the constellations would be if a new and brilliant star were to shine out in some well-known star-group.

A few hours' observation sufficed to place the planetary character of the star beyond a doubt. Soon after, Olbers sent to Gauss a series of observations for the determination of the new planet's path, and in *two hours* from the receipt of Olbers' communication, Gauss had completed the calculation—an achievement unexampled in the history of physical astronomy. The orbit of the new planet was found to resemble that of Ceres, Pallas, and Juno, but its distance is somewhat smaller. It is the only asteroid which has ever been visible to the naked eye, Schroeter being the only observer who has so seen it.

Then for a long time the progress of discovery ceased. It would seem that no further search was made until about the year 1830, when M. Hencke, an amateur astronomer of Driessen, in Germany, began a careful survey of the

zodiac belt. *For fifteen years* he continued to examine the heavens without success. During all those long years he was intent on the study of stars which no unaided eye has ever seen. Laboriously he traced down their configuration, returning again and again to star-group after star-group in hopes of detecting the signs of change. But it was not until the close of the year 1845, more than thirty-eight years after the discovery of Vesta, that Hencke's unflinching perseverance met with its just reward. On the 8th of December he wrote to M. Encke, of the Observatory of Berlin, announcing the discovery of a star in a certain position which he felt sure had hitherto been untenant. Encke examined the heavens in this neighborhood six days later, with the magnificent refractor of the Berlin observatory; and quickly discovered a star which was not marked in the observatory chart. As in former instances, the planetary nature of the stranger, and the fact that it belongs to the same region of space already assigned to the other asteroids, were quickly established. Encke left the choice of a name with Hencke, who selected the name Astraea.

With the discovery of another planet by M. Hencke, in July, 1847, may be said to have begun the long series of additions to the planetary system, which has continued without interruption up to the present time. Not one year has passed without the discovery of at least one asteroid, and in every year, except five, three asteroids and upwards have been detected. In 1852, eight were discovered; in 1857, nine; and in 1861, no less than ten—the largest number ever yet detected in a single year.

There is so little variety in the records of the discovery of asteroids, that it would be extremely wearisome to our readers if we were to give an account of the detection of all or even of many of the asteroids. But some incidents in the progress of discovery have been well worthy of notice.

In some instances, so closely have the heavens been scrutinized by observers in different places, that the same asteroid has been detected independently by two observers within a few days or hours of each other. For instance, Mr. Hind detected Irene on the night of the 19th of

May, 1851, and, four days later, M. Gasparis, of Naples, detected the same asteroid. Within a year, M. Gasparis had his revenge, however. On the 18th of January, 1852, Mr. Hind marked down in the ecliptical chart which he was compiling, with the aid of Mr. Bishop's refractor, at the Regent's Park Observatory, a star of the eleventh magnitude. Cloudy weather prevented him from re-examining this object for exactly two months. On the evening of March 18th, he turned his telescope to the spot which had been occupied by the small star; but the star had vanished. Immediately he instituted a searching scrutiny for the missing object, and would probably soon have detected it. But, while the search was in progress, news came of the discovery of an asteroid, in this particular region of the heavens, by M. Gasparis. Professor Gauss was able to show that this object must on January 18th have occupied the exact place in which Hind had seen a telescopic star. In this case, although Hind had not been able to detect the missing object, he would have been credited with the discovery of a new planet had he missed the star one day earlier. As it was, De Gasparis, having detected the planet on the 17th of March (one day before Hind suspected its planetary nature), is entitled to the credit of the discovery.

The planet Amphitrite was detected independently by three observers on three successive days, viz., by Mr. Marth, at the Regent's Park Observatory, on March 1st, 1854; by Mr. Pogson, at Oxford, on March 2nd; and by M. Chacornae, at Marseilles, on March 3rd.

The discovery of the planet Melese was attended by circumstances of singular interest. M. Goldschmidt was engaged at Paris in searching for the planet Daphne. This planet had been discovered by him in 1856, but was so unfavorably situated at the time of its discovery that only four views were obtained of it, and the true nature of its path remained doubtful. Goldschmidt, making use of a roughly calculated ephemeris of the planet's motion, was scrutinizing the sky for Daphne, when he detected a minute star, which presently turned out to be in motion. He announced his discovery, and the planet,

which every one supposed to be Daphne, was carefully tracked by experienced observers. However, when its orbit was calculated, it became clear that there was some mistake. The planet just discovered had doubtless been very near the place occupied by Daphne in 1856, but not at the precise point indicated by M. Goldschmidt's observations. A careful computation soon placed the matter beyond a doubt. M. Goldschmidt had accidentally discovered a new asteroid.

The reader may wish to know whether Daphne was ever re-discovered. For several years it baffled the skill of astronomers, and remained obstinately hidden. At length, however, Dr. Luther detected it in the year 1862.

Equally singular were the circumstances attending the discovery of the planet Erato. MM. Forster and Lesser, of the Berlin Observatory, having received intelligence of the discovery of the planet Olympia, made a series of observations on a planet which they found in the place indicated. When these observations were published, and compared with those made by other observers, a remarkable discrepancy was observed. On a careful revision of their observations, MM. Forster and Lesser came to the conclusion that they had been unconsciously following the wrong planet; in other words, they had detected a new asteroid.

Something similar happened in the case of the planet Feronia. On May 9, 11, and 12, 1861, Dr. Peters made observations on the planet Maia, which he had discovered a month before. After the 12th clouds and moonlight interfered for awhile with his observations. On the 29th of May, however, he resumed his labors, and continued to track the planet Maia, as he supposed, for several days. But towards the end of the year, Mr. Safford, of the Cambridge (U. S.) Observatory, in comparing his own observations of Maia with those of Dr. Peters, found that all the latter, after May 29th, were discordant with his own. On a further examination of Peters' later observations, it turned out that he had got on the track of a new planet.

It has happened once, and once only, that the same observer has detected two planets on the same night. On the 19th September, 1857, M. Goldschmidt dis-

covered the planet Doris. As soon as he had convinced himself of its planetary nature, he turned his attention to a star which he had noticed earlier in the evening. He found the star had moved away from its place, and searching for it, quickly detected the planet Pales. The two planets at the time of discovery were separated by a distance equal to about one-tenth part of the moon's apparent diameter.

In the week which began on September 14, 1860, no less than four minor planets were detected.

The honor of adding a new world to the planetary scheme has led many astronomers to take part in the search for asteroids. It requires some knowledge of astronomy, and especially some practical acquaintance with the details of observatory work, to appreciate the intensity of application, the anxious watching, which are required before one of these minute bodies can be detected. Inexperienced persons are often disposed to imagine that the discovery of a new celestial object is no great feat. They point to the circumstance that it was merely by an accident that Sir W. Herschel detected Uranus; and they add that such an accident ought not to lead us to attach any particular value to an astronomer's work. Perhaps no instance could better serve to illustrate the magnitude of the labors which ordinarily lead up to *accidents* of this sort. Before he detected Uranus, Sir W. Herschel had scrutinized every square degree of the northern heavens, discovering upwards of two thousand new nebulae, and counting, star by star, twenty times as many orbs as are visible, on the clearest night, to the naked eye.

Every asteroid that has been discovered may be looked upon as representing weeks and months of harassing labor. And, therefore, we cannot refuse to assign great credit to those who have been successful in adding to the list of minor planets. It would perhaps be invidious to draw distinction—nor, indeed, is it very easy to do so. The circumstances under which different astronomers have labored are so various, that the mere number of planets discovered by each hardly affords satisfactory evidence of the amount of work which each has applied to the search.

The astronomer who has actually discovered most of the minor planets is Dr. Luther, who is credited with no less than fifteen. Next comes Goldschmidt, with fourteen; then Hind, with ten; De Gasparis, with nine—and so on.

But the palm for energy and determination in the search for asteroids would doubtless be accorded, as readily by Dr. Luther as by the other astronomers, to the late M. Goldschmidt. The fourteen asteroids discovered by the latter were all detected within a period of $8\frac{1}{2}$ years, whereas $14\frac{1}{2}$ years were occupied by Dr. Luther in the detection of fifteen asteroids. But this is not all. Goldschmidt worked with instruments which most astronomers, and even many amateur observers, would regard with contempt. Instead of the magnificent refractors of 7, 8, 10, or even 12 inches aperture, which other observers made use of, he used telescopes of $2, 2\frac{3}{4}$, and 4 inches aperture. Nor were these mounted in the proper manner for observatory-work. The Rev. R. Main, of the Radcliffe Observatory at Oxford, remarks that "none of M. Goldschmidt's telescopes were mounted equatorially; but that in the greater number of instances, they were pointed out of a window, which did not command the whole of the sky;" and he adds, that he leaves astronomers to form their own opinion "of that fertility of invention and resource, that steady determination to conquer apparently insurmountable difficulties, the untiring industry, and the never-failing zeal, which realised such splendid results with such inadequate means."

The search for minor planets grows daily more difficult, and nothing but the steady improvement in the construction of telescopes, and the equally steady increase in the number of skilled observers, enables astronomy to record year after year the discovery of several of these minute bodies. The four planets first discovered had an average brilliancy exceeding that of an eighth magnitude star, while the average brilliancy of the ten last discovered falls short of that of a star of the eleventh magnitude. In fact, the majority of the asteroids recently discovered are altogether invisible, even at their brightest, in all telescopes less than four inches aperture. Thus the days have passed when amateur observers

might hope to take part with small telescopes, in the search for minor planets.

In conclusion, we must remark that modern astronomers do not attach much value to Olbers' theory, that the asteroids are fragments of a shattered planet. If we grant the possibility that a planet might be rent into fragments by some great internal convulsion, or else by collision with some visitant from the interstellar spaces, we seem still to find a difficulty in accepting Olbers' theory. For the careful investigation made by Mr. Newcomb, an American astronomer, into the motions of the asteroids, appears to negative the supposition that these bodies could ever have had orbits intersecting in one point—as would have been the case for some time after the supposed catastrophe. But in reality, the great objection to Olbers' theory lies in the nature of the catastrophe itself, not in any of its consequences. If a mass large enough to smash a planet into fragments had ever visited the planetary system, it would have disturbed (by its overpowering attraction) the whole economy of that system; and there should no longer have existed those orderly motions and symmetrical relations which we now admire. On the other hand, there is immense difficulty in the supposition that internal forces should have produced the effects imagined by Olbers. There is nothing in the analogy of our own earth to warrant the supposition that such a catastrophe is possible. Widespread as the destructive effects of volcanoes and earthquakes may appear to the inhabitants of the disturbed districts, they are in reality of insignificant extent when viewed in relation to the magnitude of the terrestrial globe. The lofty Himalayas, which may be looked upon as the most gigantic known results of subterranean forces, are so minute in comparison with the earth's volume, that they would be scarcely perceptible if figured on the true scale upon a six-feet globe. But we have the clearest evidence that these mountains, and all the large mountain-ranges of the earth, have been due—not to the sudden action of subterranean forces, but to a process of upheaval occupying thousands of years. To conceive, therefore, that forces have existed within another planet, sufficient to scatter its mass into fragments and to propel

these forth upon independent orbits, may suit the fanciful theorizer, intent only on finding a ready solution for a perplexing phenomenon—but certainly, such a speculation requires much stronger evidence than has yet been forthcoming before more sober reasoners can feel themselves justified in accepting it.

Colburn's Monthly.

A VISIT TO AN OPIUM HOUSE.

WHEN I was stationed at Dum-Dum, in the Bengal Presidency, in 1859, I paid a visit to one of the opium smoking and chewing houses, of which there are many in Calcutta unknown to the public. The laws are very stringent with regard to them, and the difficulties I met with in carrying out my intention of visiting one of them were very great.

My curiosity was first excited by my moonshee, Mohammed Bux, who came daily to give me instruction in Hindustani, and described those dens most accurately to me, as he had an intimate acquaintance with them, his father being a great devotee at the shrine of—I suppose I ought to say—Morpheus.

I proposed to him that he should obtain for me admittance to one of these places, and he promised to try to do so.

Mohammed Bux was a very intelligent, well-educated young man, speaking English fluently and correctly, but of course with a strong *chee-chee*, as the native accent is nicknamed.

He was a Mussulman, as his name will tell, and a very devout one. He worshipped three times each day, kept all the fasts and feasts, had a proper dislike for *pig* and all intoxicating drinks. He was by far a better educated man and of a higher order of intelligence than most of the schoolmasters of national schools here in England, and yet he and all of his class are treated with the greatest contempt and often with insult by the lowest Europeans in India.

The Calcutta moonshees are generally employed as clerks in the public offices, and also by merchants as accountants, &c., and, in fact, do all the work there which is done here by the City clerk. Some of them instruct young civil servants and military officers in the native languages.

These latter are the best paid, and rank highest in their order. They are always remarkable for their large white muslin turbans and white flowing robes, and are seldom to be seen without a white umbrella to shade them from the sun. They are very polite and obliging, always willing to direct strangers who cannot speak the native languages about the city.

Indeed, most of the natives I have met with in India during five years' sojourn there have been very courteous and respectful; both Hindoo and Mahomedan, when properly treated, quiet and civil.

In Calcutta the very worst types of both are to be found. I suppose this is owing to its being a large city and seaport; or rather port for sea-going vessels, as the sea is upwards of a hundred miles from Calcutta. Those natives who prey upon the sailors learn all the vices of the European, and retain none of their own redeeming qualities. Principal amongst these latter are cleanliness and abstemiousness. That "Alsatia" of the king of Oudh at Garden Reach (near Calcutta) has also a bad effect. He harbors there upwards of two thousand of the rogues and vagabonds of Calcutta, who can defy the police. The government is now taking some steps about this nuisance.

Mahammed Bux spoke to one of the men who kept an opium-house, and came to tell me that if I would swear not to tell the police how I obtained admittance, nor give any information that might lead to the place being discovered, that then I would be allowed to see what I pleased. This I refused. I gave my word, but would not swear. It was finally accepted on account of the repeated solicitations of the moonshee.

It was a bright moonlight night when we started in a gharrie, or native carriage, from Dum-Dum to Calcutta. A moonlight night in India is almost as bright as day—lightsome enough to read—and as then it is tolerably cool, it is hard for any one to resign himself to sleep. I used to love those moonlight nights, and used often to remain out until gun-fire (daybreak), enjoying the cool air, listening to the melancholy cry of the jackal, and watching the various species of large bats gliding through the

air and the brilliant fire-fly lighting up the foliage.

Dum-Dum is about seven miles distant from Calcutta, and the road runs through a low marshy ground, rice fields, and cocoa-nut groves.

It was about ten o'clock when we approached the China bazaar. Here we had to slacken our pace on account of the formation of the streets; they were very narrow, having on either side a deep ditch or sewer uncovered, the effluvia from which was very offensive. The houses were very high and solidly built, and evidently of great age. The China bazaar is the principal market of the native part of the city of Calcutta; it was formerly occupied solely by Chinamen, and took its name from them; now, however, there are as many Hindoos, Burmese, Parsees, &c., as Chinese there. Everything is sold there at much lower prices than in the European shops near Chowringee, and in the early part of the day crowds of Europeans are to be seen making purchases. The low grog-shops in the bazaar are favorite resorts of the sailors. These are generally kept by Chinamen. The Chinese are of all eastern people the most crafty and dishonest; they will actually rob people openly, for by sleight of hand they will change the money handed to them for bad money of their own, and then demand good money. The Burmese resemble them much both in appearance, manners, and customs. I believe they are of common origin. Both races are hated by the Hindoo.

The Hindoo—very properly called the "mild Hindoo"—seems to be an unfortunate creature. He was originally the inhabitant, and sole inhabitant, of Hindostan, and now he is the poorest and most sorry of all the multitudinous races which swarm over that Continent, from the first invader, the Mussulman, to the present ruler, the Englishman.

The term "mild Hindoo" was scouted after the atrocities that were perpetrated at Cawnpore and elsewhere during the mutiny, but it ought to be remembered that the Mahomedans were the prime movers in the mutiny—the family of the King of Delhi and the Maharajah of Furruckabad, for instance; and I have good reason to believe, from all that I have heard from

Cawnpour natives, that the worst part of the fiendish work done at the slaughterhouse was done by the butchers from the Sudra bazaar, who are all to a man Mussulmans.

After passing through many ill-lighted, narrow streets, we at length came to a halt in front of an archway, and alighted. Here my moonshee spoke a few words in *Ordu* to a man who was loitering about, and the man disappeared, telling us to wait for him in the shade. We waited there for about half an hour without any one coming, and I was becoming very tired, and felt half inclined to give it up and return to Dum-Dum, when three stately Hindoos made their appearance. The moonshee salaamed very lowly to them, and seemed to treat them with great respect—it was all policy on his part. They took me aside and cross-examined me very closely as to my object and motives in wishing to see the inside of their establishment. I answered frankly, that I was only actuated by curiosity, and did not intend to injure them in any way. We were then conducted up a flight of stone stairs. The darkness was positively painful.

The ascent to the top of the lofty houses in the native part of Calcutta is very narrow, and winding, and altogether unlighted. The steps are a foot and a half high, rendering it very tiresome to go up.

We were quite tired, hot, and out of breath when we emerged into the open air on the roof of the house. All the houses had flat roofs, and it was possible to go from one end of the street to the other on the tops of the houses.

We went on some hundred yards, and there commenced descending into another house by stairs similar to the one in the first house. We had not got far when we were stopped by two men who were guarding a door to our right. I had to deliver up my revolver, without which I seldom went far since the mutiny. A few steps more and we were ushered into the first room—the room where the opium was issued from. Here there was a long counter covered with zinc, having scales fastened at intervals all along it, and behind the counter were some dozen natives busily engaged in weighing out and giving to

attendants doses of the poisonous drug. It was kept in brass jars on shelves behind the counter.

The men issuing the opium, bang, &c., were dressed in a very gay manner. They had red turbans, light blue cumberbunds (cloth round the waist), and yellow coats, with a great profusion of lace and studs. They moved about very nimbly, attending to all calls from the attendants who came from the rooms, and would have put to shame the smartest of London shop-boys. As they wore no boots or shoes, they moved without noise. There was but very little noise here; a sort of smothered hum could be heard in the distance, but nothing more. The attendants spoke in a whisper when they came in with their orders, and the only reply they received was a nod and the package of opium, or whatever it might be. These attendants were low caste men, naked to the waist, and, with the hair closely cut and beard shaved, they had much the same appearance as the old sepoy presented whenever we came across him after the mutiny ("his occupation being gone"). I ought to have called this room the "shop:" it was presided over by a very old man, who sat in an easy-chair on a raised platform, and collected the money from the attendants after they had received the drugs from the gentlemen behind the counter. He was lynx-eyed; and out of the twenty or thirty men running in and out, not one could escape without handing in the money received for the opium from the customer, although these attendants were only too anxious to cheat if opportunity offered. The lower class of natives in India are exceedingly dishonest—roguey seems to come quite naturally to them, and they think it fair and legitimate to pilfer in a small way. Native servants are proverbial for this; they cheat their masters in every thing they buy for them. It is usual to entrust all purchases to the bearer or head servant, who will be satisfied if he can make his own gain and prevent any other person from cheating his master. The tradesmen allow these servants for "dusturi," or custom, two pice in the rupee, or the thirty-second part of the extent of all purchases.

One of the Hindoo gentlemen who had conducted us up to the shop, now advanced, and said he was ready to go round the other rooms with us.

The first room he brought us into was a long, low room, about twenty feet wide, and so filled with smoke, that we were unable for a time to distinguish any thing in it. When our eyes became accustomed to it, we could perceive a line of men on each side of the room stretched upon mats, resting their heads upon small wooden pillows, and puffing away vigorously at the pernicious drug. Some of them were not smoking, having fallen off into that lethargic sleep, so like death, which invariably follows the use of large quantities of opium.

There were men of all ages here, composed of a rather inferior caste, in all the different stages of opium smoking. Some who had just commenced the use of it, and others who, after a few years' *enjoyment* (if I may use the word), were fast *dreaming* into eternity.

The first man who attracted my attention was an old Hindoo, apparently sixty years of age, with sunken cheeks, hollow eyes, and attenuated features. He was wasted away—almost to a skeleton—seeming to breathe with great difficulty, yet puffing away vigorously at his pipe. Our guide told us the history of the unfortunate old skeleton. He was at one time a native banker in the better part of the native city of Calcutta, and was worth lakhs of rupees. During one of the periodical panics a great run was made upon his bank, which, together with the failure of many of his debtors, completely ruined him, and he had to have recourse to the Bankruptcy Court. This so preyed upon his mind that he took to opium, the Asiatic substitute for *drink*. His friends made many attempts to save him, but all in vain; and here he was now a man not much over forty years of age, looking like an aged man and tottering on the brink of the grave.

It is but very rarely that a man who has once fairly taken to the use of opium gives it up. The suffering for the want of it is so very intense, and each dose so weakens the mind and body, that the victim is a mere slave to his appetite for it.

A medical officer told me that he used, when stationed in Burmah, to suffer from rheumatism so much that he took large doses of opium to produce sleep, or at least deaden pain, and that the habit so grew upon him that he was almost mad when he stopped it. He said, "I was within an ace of becoming an opium-eater."

Upon making inquiry through my moonshee, some three or four months after my visit to this den, I heard that the poor old Hindoo banker was no more.

A little further up the room there was quite a lad, of some eighteen years of age, strongly under the influence of bang. Bang is a native drug, somewhat similar to the Egyptian "hashish;" it never stupefies, but produces a species of madness, varying according to the constitution and temperament of the consumer.

The native drunkard generally uses bang in preference to rum, or any other spirituous drink. Indeed, unless a man has lost his caste, he seldom touches European drinks. The lowest caste, or rather men without any caste, use arrick—the native rum—to a large extent, as also do the soldiers (European) when they can get it.

This youth was sitting with his back to the wall, and was singing impromptu verse, in the manner of an *improvistore*; he used the most beautiful language, and his gestures were quite graceful (the Hindoo is a very graceful creature in all his motions); his face was very thin, and his large black eyes looked like balls of fire; he had quite a spiritual appearance.

We stopped and listened to him for some time, he, seemingly, quite unconscious of our presence, until at last Mohammed Bux became quite excited, and clapping his hands, cried "Bahut nena" (very good), "aur do" (give more).

Now in this instance the bang took a very mild and pleasant form of exhibiting itself, making the young man, perhaps, more agreeable and entertaining than he would otherwise have been; not like in most cases, where it produces a frenzy, rendering the wretched creature who takes it dangerous to himself and every one within his reach.

All those fanatics who "run a muck"

are well dosed with bang before they attempt such a thing ; at least they have all the appearance of it.

There was a "muck" run through the city of Allyghur while I was stationed at the fort, and several people were killed. Three fanatics, having provided themselves with hatchets, ran through the most crowded part of the Hindoo portion of the city, cutting to the right and left, and bringing down a man at every stroke. The thoroughfare was so narrow that the people could not get out of their way. They were at last cut down by some sowars (native cavalry).

At the Moharrum, or great Mussulman holiday, in the early part of March, it is usual to have men swing themselves from poles with sharp hooks driven through their flesh. They are supposed to swing from the hooks, but there is always a rope round the waist bearing the whole weight of the body. These unfortunate fanatics are invariably under the influence of bang. With some it produces the most abject terror and trembling ; with others the most intense happiness and aerial feeling ; while, again, more are seized with uncontrollable fits of laughter, and roll upon the ground, until in many cases they burst blood-vessels.

The effects of opium are very strange. Our conductor pointed out to us a fine muscular Hindoo in a sound sleep, the picture of native health, and told us that he had only commenced taking opium, and that it would, after a while, take a much longer time before he would be in that happy state of oblivion. It seems that at first it simply produces an *unrefreshing* sleep, from which one awakes with a headache, or at the best with a very heavy feeling about the head ; then a small dose relieves very much, and so on. Like drinking, a man is drawn into it. After using it for a little while it produces a pleasurable, quiet state of excitement, which gradually gives way to slumber. In the final stage it becomes a necessary of life, the opium-smoker or eater being in the most miserable state of trembling, weakness, and depression, until he becomes well dosed. Of the two, I think the abuse of intoxicating drink the lesser evil, although I have seen so very many fearful endings brought on by the bottle.

I shall just mention one case. Captain C—m, of the Irregular Cavalry (natives), was a very fine-looking fellow, and a very dashing cavalry officer. He had distinguished himself in the Sikh war (Punjaub), and also lately in the mutiny. I first met him in Central India, and at that time he used to take far too much of brandy pawnee (brandy-and-water), yet not much more than the generality of drinking men in India. He was a great favorite with everybody who knew him, and was beloved by his men (Sikhs) for his daring, dashing conduct in action, and his kind though firm manner of commanding his troop. He was, when I met him, on the Governor General's escort with me, his troop forming part of the cavalry, and my company of the infantry.

A few years afterwards I saw him in Fort William, at Calcutta, tied to his bed in delirium tremens. It was positively frightful to listen to his ravings ; he fancied that the room was filled with devils, snakes, rats, and every description of vermin, and would at times start and shudder, and say they were crawling over him. Then he would tremble, every nerve quivering, his eyes starting from his head, his features distorted, and foam coming from his mouth. No one could recognize him. However, he recovered, and no official notice was taken of his illness, as he was on his way home on sick-leave, having left his troop at Umballah, in the North-Western Provinces. He went home, had his six months' leave, gave up drink altogether, married a young and beautiful woman, and brought her back to India with him.

I saw him at Wilson's Hotel on his return to India, and was introduced to his wife. He then told me that he drank nothing, when I asked him to have a "pig" (the slang of Anglo-Indians for brandy and soda-water). A few months after his arrival he again broke out, and, notwithstanding the presence of his charming young wife, and the remonstrances of his brother officers, who all liked him, he drank to a fearful excess.

Another attack of delirium tremens carried him off. He died in madness, "Brandy, brandy !" the last words upon his lips. This is but one instance

of many similar ones I have seen while serving in the East.

The absence of refined society, the intense heat of the climate, idleness, and the necessity of remaining in the bungalow all day, lead many, who, under other circumstances would be temperate, into dissipation. And when once commenced, alas! how difficult to desist from it.

Close to the end of the room I observed a man lying, apparently dead, his jaw having fallen, and with his eyes still open. Upon drawing the attention of our conductor to the man's state, he said,

"Oh, he is not dead, but a few more suns will see him so."

I then asked him if men often died there, and he replied,

"Frequently, daily; we get them carried home at night, and their friends being in expectation of the event, there is no noise made about it."

I then regretted having given my promise not to mention to the police anything about this gentleman's establishment, yet if I had not done so I should not have been permitted to see it. However, the police have many years ago found it out, and closed it for ever.

When I was at Allahabad I had a servant, a bearer, a great opium smoker. He was for a long time in my service before I knew that he used opium. I often noticed a heavy sleepy look about his eyes, but was far from divining the true cause, not having been very long in the country at the time, and having been unacquainted with the vices of the natives.

One day, while there was an old native infantry officer sitting in my bungalow, this bearer brought in the "order book" for me to read the orders of the day, and whilst waiting, with his arms folded in eastern fashion, he nodded frequently, and at last having fallen off asleep, staggered, and was near falling to the ground. The old native infantry officer said to me at once, "That fellow smokes opium: take care he does not burn down your bungalow." We had to be very careful against fire in those bungalows, as the smallest spark would set one in flames, the roof being thatched, and dried by the heat

of the sun to tinder. The native workmen, when out of employment, used sometimes to set fire to many of them so that they might have work in rebuilding them.

My opium-smoking bearer, however, never did any harm to my house, and as he was a good servant I retained him, not considering his partiality for opium a sufficient reason for discharging him. This use of opium and bang, together with gambling, are the principal vices of the natives of British India.

An intelligent Hindoo, an opium eater, once told me that when he had taken sufficient opium to act upon him he experienced the most delightful sensations, had the most entrancing dreams, heard the most bewitching music, and inhaled, or dreamt that he inhaled, the sweetest of perfumes. He said, "Oh, sahib, you do not yet know what pleasure is, nor can you until you have felt as I have felt."

Those of the natives who take "bang" do not live long; they frequently go mad, and if not, waste away and die of consumption. They all gamble, and as they are generally of a very avaricious disposition, they become wildly attached to it, and would, if they could, stake their lives when all their money has disappeared.

Of all the Eastern people I have met with, the Chinese are the most inveterate gamblers; they gamble at all times and places, and are most adroit at cheating. A Hindoo would stand no chance against a Chinaman either in gaming or trading.

Our guide now led us up a few steps, and raising a crimson silk curtain, introduced us to the second room—that of the *élite*, where none of the *oi polloi* were admitted.

This room was not so long as the first one, and was about twice as broad and much more lofty. It was hung all around with crimson silk curtains and golden tassels; the roof was beautifully gilded and decorated with paintings of birds, &c.; four or five large lamps were suspended by silver chains from the ceiling; these lamps were parti-colored green and red, resembling in every particular those used by the Mussulmans in their mosques. The air was filled with the perfume of jasmine mingled with a sweet

incense, and of course the smoke of the opium, together with the others, produced a most delightful soothing sensation. This room was better ventilated than the other, and not so crowded. Each smoker and chewer had a magnificent soft velvet Persian rug to lie on, and a multitude of pillows covered with silk, handsomely embroidered. The occupants were of a wealthy class, dressed in valuable silks and Cashmere shawls, and covered with jewellery. I here recognised many faces that I was in the habit of seeing every evening on the *course* (the *Rotten Row* of Calcutta) in carriages.

It seemed strange that these men should come to this place instead of using some rooms in their own house for smoking-rooms. I asked my moonshee about it, and he told me that many of them do chew and smoke opium at home, yet they prefer to go to a regular shop, where every thing is quiet, and where no one will know anything about them outside of the place.

We did not stay long here, as the Hindoo swells might be annoyed at our presence. There were some wealthy merchants amongst them, and they all had the fat, greasy appearance of well-to-do natives.

There was amongst them a very old Mussulman, who bore a startling resemblance to the King of Delhi. He was about sixty or sixty-five years of age, had a very severe cough; he was in consumption, and was fast hastening himself to his doom.

I heard afterwards that he had been a professor in a Mussulman college, was a deeply read man, and of considerable wealth; he took to opium only lately to deaden the pain he suffered from rheumatism. That is too frequently the case with the natives; they commence by taking small doses to relieve pain, and then the habit so grows upon them that they find it impossible to wean themselves of it until it becomes a part of their life and the cause of their death.

I thought as I left the room of the shortness of man's life, and yet how zealously all around were striving to make it still more brief—the European in the rum-shop; the Native in the opium-house.

We were conducted back in the same

manner in which we obtained admittance, and once more we breathed the cool fresh air, and were in the lovely moonlight which was flooding the narrow noisome passages leading to this iniquitous den.

Before leaving I offered a few rupees to our guide, which he politely refused, simply saying, "No, sahib, I thank you, and will thank you more if you keep your promise and a 'locked mouth.' "

On the way home the moonshee told me that his brother died from attending that shop too frequently, and that he did not expect his father would live very long. He said his father was not there this night, as he was too ill to leave his bed, and that was the reason he brought me, as he would not wish his father to see him there, fearing that the old man might imagine he was acting as a spy upon his actions.

The natives, as a rule, have very great filial affection and respect; they have many good qualities which are not admitted by the Anglo-Indians. The truth is that few Englishmen know much about the Hindoo. It is considered to be correct to snub him on all occasions, and have as little as possible to say to him; to look upon him as an inferior animal, and always treat him with contempt. The Anglo-Indian is too often a "snob" of the first water.

There are many of these opium-houses in all the large cities of India; more in the large cities of the North-West and Bengal than in Calcutta; for Calcutta, although the largest European city in India, is comparatively a small place, Allahabad, Benares, Agra, and many others of the native cities being much larger. It would be impossible to discover and put a stop to them in these places, as we have but a small number of Europeans stationed some miles away from the native city, and the police in the Mofussil are all natives, and very likely addicted to the pet vices of their fellow-countrymen.

When parting with my moonshee that night, I said to him, "I hope, Mahomed Bux, you will never, like your father and brother, seek comfort in opium;" and he replied, "No, not as you mean. If I ever take opium, it will be but one dose, and that will give me what peace and comfort there may be after death."

Chambers's Journal.

A BRUSH WITH MALAYS.

It was in the year 185— that I left Hobart-town for China. Contrary to the usual route, we resolved to go by Torres' Strait, a passage which had justly a bad reputation. I say justly, because it is full of dangers on every hand. Coral-reefs are extremely abundant, and many of them come to within a few feet of the surface. The peculiar danger connected with them is that there is hardly any means of telling their presence. The depth of water you may be floating in may be sufficient to float the *Great Eastern*, or even to cover St. Paul's, and yet the next minute you may strike on one of these hidden rocks. It was not considered safe to sail during the night, or even during the five or six hours in the middle of the day, for during the latter portion, the glare on the water prevented the peculiarly calm appearance which usually indicates the presence of reefs from being seen. To add to the danger, you had North Australia, with savages of a merciless type, on one hand, and Papua with its cannibals on the other. The traditions among Australian sailors—men who have for years been engaged in the coasting-trade—were anything but comforting. We had, however, got safely through the strait, and had deposited our thanksgiving on Booby Island. This island is altogether uninhabited, but accommodation has been provided on it for the deposit of stores for the benefit of ships' crews who may be unfortunate enough to lose their vessels in this neighborhood. Ships are invited to add to the deposit as they pass, and as sailors in such matters are almost invariably generous, they seldom fail to pay the island a visit.

Three days after, we found ourselves within sight of one of these small islands, to the east of Papua. The wind had fallen, and our little vessel, a merchantman of about two hundred tons burden, "lay like a painted ship upon a painted ocean." A calm in these East Indian seas is something worth going almost as far as they are from England to see. I have seen Atlantic calms, but though I have been for ten days lying at the equator without a breath of wind to ruffle the water, there has always been a long

swell, which kept the vessel from lying perfectly at rest. I have been in the Indian Ocean when it is becalmed, and when you have perfect stillness, where the silence was unnatural, and made every one half-frightened at it; where, when anything was thrown overboard, it struck the water with a *plash* which was startling, and which went down, as you could see if you dropped it over the vessel's side, slowly, moving from side to side, down, down, still within sight, till at length it became indistinct amid the thickening waters. But a calm in the shallow East Indian seas surpasses all. The water is shallower, loses, therefore, its indigo color, and becomes a bright green. The evaporation from it is greater, and in consequence, the water is thicker, fuller of phosphorescent life. It is full of life, from the small animalcula, or whatever they are, which produce the phosphorescence of the sea, to the shark, which abounds here.

I can, I think, give a fair approximation to what a calm here is like, if the reader will imagine a sea mirror-glass stretched beneath him. Come aloft with me. Take care, for you, like myself, are only a passenger, and a slip here would mean broken bones. Now we are aloft—we look down on our ship. How small she looks! It is a sensation worth running the risk to get. Round us lies the sea of glass. Now, while that cloud is over the sun, it looks simply like glass; but when the cloud passes, we shall be unable to look at the water in any direction except one. Above, is the huge cap of blue, fitting down on a hard surface in which our vessel is fast fixed. Or perhaps we are in sight of land; if so, the sight is robbed of all its hard features. There is the sea of glass, no doubt; but the land, covered, as it is sure to be, with vegetation from the thin line of golden sand at its base to its highest peak, looks green and refreshing. In the daytime, during the daily calm which intervenes between the land and sea breezes, the island does not merely stand out of the water; it is suspended in the air. This is the nearest description I can give of the ordinary, every-day mirage of the East Indian seas. Land and water do not meet; you can see

a broad band of space separating the one from the other. You can see *under* the land. You can see also that this is not got by blotting out the lower portions of the island, for you can distinctly recognize, though completely separated from the water, the sandy beach and lowest objects which the land contains. Suppose it is a small island, you can then see not only the broad band of space beneath it, and on which it is floating, but that the extreme ends of the land to your right hand and left have been rounded off, so that there shall be no hard line to offend the eye.

In such a calm, we were lying near a certain island. Lazily we had watched the blue and green snakes which floated by the ship's side, six, eight, and ten feet in length. We had looked at the land until, lovely as its green slopes appeared, we had ceased to feel any interest in them. We had seen no sign of inhabitants; no smoke; nothing which, even with the aid of a glass, would indicate the presence of man.

"Why can't we go on shore?" asked Richards, one of my fellow-passengers.

"Why not?" answered Milner.

I saw no reason, and after some little coaxing, the captain saw none. At the last moment, however, an unexpected difficulty arose. Morton, who was the fourth of our company—all of us going out to situations in the same house in Hong-kong—declared that he would not go. The fact was, he was not allowed to go. He had fallen over head and ears in love with Ethel Edwards, one of those pretty Australians who make such havoc with Englishmen's hearts. He had known her slightly in Hobart-town; but since coming on board, having to take his choice, like everybody else, between quarrelling and love-making, he had chosen the latter. By this time, Morton and she were engaged, and were so delighted with each other's society that nobody could ever get a word with either apart from the other. Now, Morton was a capital hand at an oar, was good company, and, moreover, close upon six feet high, with an arm as strong as a young giant's, and with any amount of pluck. We did not wish to leave him behind, therefore, and at last succeeded in persuading him to ask Ethel to accompany him. He seemed to jump at

the proposal. She was equally ready, but—there was somebody else to consult. She was going to China (heaven knows why), in charge of a square-shouldered, square-faced old woman. Mrs. Prime was a woman whom you hated in about three days after knowing her, and got to like in about six. She was always talking about the "cause," which, in her mind, evidently represented something that had to be worshipped with every form of honor. She went in strong for missions, and would bore you for an hour about the progress the cause had made in the case of a poor negro whom she had heard of. If you were not most careful, she would systematically entrap you with an argument about the Coming Crisis, or get your opinion on the Fifth Seal. But with all this, she was a capital woman, full of good-nature, and occasionally with a dry humor, which shone all the more conspicuously from its strong setting of Puritanism. She could be obstinate on almost any subject; but on anything which she imagined to concern the welfare of Miss Edwards—her responsibility, as she called her—she could be as unyielding as a rock. We had much trouble in demonstrating to her that there was no danger; but after accepting all sorts of assurances, and offering to go herself—a consummation which we devoutly did *not* wish for—she consented. In a few minutes, our boat was lowered, and four of us, accompanied by a couple of sailors and Miss Edwards, started for the land.

We had taken fishing-lines, and intended, if we could, to return with some fresh fish. But when we reached the beach, to get to which we had to take our boat for nearly a quarter of a mile over coral-rocks, which just allowed us to float evenly and pleasantly over them, and which we afterwards observed did not shelf gradually to the sea, but were all about the same level, we found it a fine firm golden sand, beautiful at any time, but doubly so to us, who had been confined for six weeks to the lumbered decks of the *Mary Ann*. Making use of a stone as an anchor, we all sprang ashore, and ran about like so many children let loose from school. We had agreed not to go far from each other, lest there should be any danger; but of such we saw no sign. We were on land,

and, perhaps, the very first Europeans who had ever set foot there.

Presently, the sailors caught sight of a turtle, and for half an hour we were engaged with him; then, as the time drew on, and we began to think of returning, we were surprised by seeing a boat leaving our ship, which was a good mile away from the shore.

She was not our boat—of *that* we were sure. Presently, she hoisted her triangular sail, and was recognized at once by the sailors as an ordinary *pram-pooang*, or canoe. How she could have got to the ship without our seeing her puzzled us a good deal, till we recollect that, after getting a short distance from the ship, we had all been too eagerly intent on the shore to give her a moment's attention.

I don't know that we were alarmed. We had all brought good sticks, and, though we had no weapon more formidable, were yet pretty confident that we should be able to give an account of ourselves. If there had been any alarm, it vanished the instant we made out that inside the boat, besides three half-naked Malays, sat Mrs. Prime. Serene in all her native dignity she sat; and though we knew that the frailty of her boat would be anything but satisfactory to her, still she held herself up with the proud determination to uphold the majesty of a British matron. We could see that there was upon her a deep sense of her responsibility. She had that peculiar squareness which we had seen so often when she was talking about the "cause." But what could have induced her to come on shore? A severe trial was before her. The natives, when they got about three hundred yards from the shore, deliberately pulled in their oars, and threw out the stone which served them as an anchor. Mrs. Prime indignantly asked what they were doing, but as she spoke in English, her demand was not peculiarly intelligible. In vain she waved her umbrella, and pointed to the shore; in vain she ordered them to pull up the anchor, and go in further; the men could not or would not understand her. To her surprise, they jumped boldly into the water, which was about three feet deep. To them this was a matter of slight difficulty. Like most Malays, they were not burdened with

more than the customary wrapper tied three or four times round the loins. It seemed therefore to Mrs. Prime that her only chance of getting to shore was either to follow their example, or to accept their offer—namely, to carry her on their shoulders to the beach. The first way out of the difficulty was evidently not to be thought of; and the second, though terribly against the feelings of an elderly lady inclining to stoutness and respectability, was almost as bad. Still, as she would have expressed it, necessity was laid upon her, and there was nothing else that could be done. Accordingly, therefore, see her mounted on the shoulders of two chestnut-colored Malays—little fellows, like nine-tenths of their race, who staggered beneath their unwonted load. We who were on the beach roared with laughter at the sight; the men shouting at each other, as first one, then the other, failed to get good foothold. We expected every minute to see them come down burden and all into the water. But she, with stately majesty, was equal to the situation. Though every moment she felt her throne tottering, she still sat erect, umbrella in one hand, gathering her black silk skirts in the other, and holding a small packet as well. The packet we afterwards found to contain tracts. Behold her at length safely landed, the dangers of her voyage and of her triumphal entry passed away.

"What on earth brought you on shore?" was asked by all of us.

"The boat, of course, and those heathenish men, who, I'll be bound to say, are idolaters.—But where is Miss Edwards?"

We pointed to her walking, by this time nearly a quarter of a mile from us, with Morton. It was precisely the place where a man would be tempted to make love, and where, as in Morton's case, this process had already been begun—it must have seemed to them a place fairy-like, almost celestial.

"Who are those men, and what have they been doing at the ship?"

"They have brought fowls and some outlandish fruits for sale, and have come on shore to get three or four dozen more."

We afterwards found this to be quite true. The four Malays in this canoe had gone on board, as they do to ships

passing all these islands, with vegetables, fruits, a few fowls, and a mat or two of native manufacture. As usual, too, they had gone rather with samples of what they could get, than with sufficient stock to supply the crew's wants.

"But which way did the boat come to the ship?"

"Round that corner. We thought you had not seen it."

"That explains why we did not see it."

"I don't like the look of those fellows," said one of the sailors, who had come ashore with us.

"No; they look as if they had all the darkness of heathendom upon them," said Mrs. Prime. "I wonder if the cause has ever made any progress upon this island."

We could not give any information on this point; but as we strolled in the direction taken by Morton and Miss Edwards, we suggested that Mrs. Prime should herself begin the work. She instantly met us with the rejoinder that she intended to do so, and had brought a packet of the good seed with her.

"It was a pity to see such poor human creatures, not so very bad-looking either, without sufficient clothing, and never seeing a missionary."

"But where are these darkies going to now? They have struck into the bush."

"We've seen no trace whatever of any house or rice-field. I don't believe there is anybody living on the island."

"What's that?" said sailor number one, pointing at the same time across a portion of a headland rising in front of us.

"The masts of a Malay pros," said sailor number two.

"I don't like the looks of this. No village, a small island, and one of those craft here."

"It's queer. Who are those fellows that have been aboard?"

"It's my opinion they are sharks, and only went on board to see what sort of a craft we are, and how many men we carry."

"Do you think there is any danger, then?" said Mrs. Prime. "Then I

must have my Ethel by me. Poor thing, she can no more take care of herself than a baby."

And away ran the good old woman as fast as she could towards Morton and Miss Edwards. We meantime continued to talk of the situation. To tell the truth, none of us who were passengers believed there was any danger; though the sailors—one, the old weatherbeaten boatswain—evidently did. As I have mentioned, all of us had sticks, but were unarmed beyond these.

"We might get a good look at the native boat over there," suggested I.

"And see where the village is from which these fowls are to be brought," added another.

"There is no village here, nor fowls either," said the boatswain. "Now, then, all hands get ready for going aboard. This game will be serious, I shouldn't wonder. Ship ahoy!" shouted he to Morton and the two women who were ahead. We looked towards them. They turned to come towards us. It was immediately afterwards that I observed two or three dark moving forms dodging along the bright green verdure which came quite down to the sand. The trees formed a thick covert through which it was difficult to pass, and, indeed, through which we had in vain looked for a means of ingress. They terminated abruptly, and formed, therefore, a clear definite line, marking the boundaries of the golden sand and of the jungle. It was against their deep background that I observed what I concluded to be Malays. At the same moment, one of the sailors noticed them, and at once called attention to them.

"Look out!" shouted we all to Morton. At the same time, four or five men darted from the wood, and made for the little party of three. Instinctively we all rushed towards it. The fellows were some distance from Morton, who could not at first imagine what we were running for; in a few seconds, however, he turned, and saw the whole danger at once. The Malays were short fellows, could none of them have been more than five feet two or three in height, but were all armed with the villainous Malay kreeze. We could not, running though we were at our very

best, get to him before the Malays did. Morton, however, was ready. Putting the two women behind him, he stood with a thick stick hung prepared to strike, in a position that made his assailants not quite so ready to attack him as they had been ten seconds before. He would not have escaped, however, but for help he did not expect. One of the Malays had worked round so as to distract his attention, while one of his friends prepared to rush in from the opposite direction. The latter did rush in; but at the same time the old governess, roused as we could see beyond further endurance, rushed out; her umbrella she had got down; one hand on the handle, one on the steel ribs, and she made a bound forward with the ferrule so directly in the villain's face, that a practised swordsman could not have done it better. He fell backwards with a yell of pain. Immediately afterwards, the packet of tracts, the good seed which I am sure was regarded as the future evangelist of this region, was flung at the head of another.

All this we saw as we were rushing to the scene. Two of the Malays had already been put *hors de combat* by Morton, in addition to the victim to Mrs. Prime's umbrella. The remaining three thought proper to retreat.

"Knock them over!" said somebody.

"Let 'em alone!" shouted the boatswain. "All hands to the boat. I knew there was something queer about this place, and we mayn't have seen the end of it; so look alive."

Ethel Edwards neither fainted nor got frightened. I believe Morton would have liked to see her faint, just for the pleasure of carrying her to the boat.

On rounding a small headland, we saw half a score of Malays at our boat, which they had got in quite high and dry.

"We've got them both fore and aft now, so we shall have to look alive. We must fight for that boat, and be quick about it too, or these other fellows will be here, and nobody knows how many more," said the boatswain.

Away we ran as hard as we could get our two ladies along with us; but before we had half reached the boat,

another party had joined them. It was a bad look-out. I don't know what the others felt, but I, for a moment at least, did not think our chance of ever being on board the *Mary Ann* was worth much. Even then, I noticed that Mrs. Prime kept near her charge, like a hen does to her one chick, although Miss Edwards was quite as well able to take care of herself as she.

"Stop all. What is to be done? We can't fight that lot with these women."

"These women, indeed! They are no hinderance, I'm sure."

"That they are not, indeed," said one; "but still it is dangerous."

"What's to be done?"

"The native boat," suggested I.

"Right; that's our only chance."

This was lying nearly a quarter of a mile from the shore, but right before us. As already mentioned, the bottom was sharp coral, and scarcely shelved at all. Into the water we all went. There was no time for ceremony. The two ladies were each held by two of us, one at each hand, to help to pull them through the water. Our way to the prampong was direct. The Malays at once saw our intention, and darted into the water to intercept us. The race was exciting. We had the advantage of good boots to tread on the sharp coral, and which of course put us further out of the water; and of the shortest distance. But we had to take care of the two women. I believe we could have got on twice as fast but for them.

As we ran, dashing through the water, we could see that they were gaining on us. If they even only intercepted us, they could get the boat away before we had time to reach it.

"We can't reach it before them; we shall have to fight it out here in the water."

"Send on somebody to fetch the boat to us," suggested Mrs. Prime.

"By Jove, she's right!" said the boatswain.—"You Smith and Milner, go ahead, and get the boat ready."

Away they went, and in a minute were at the boat, into it; the sailor's knife was out, the cable cut; out of the boat again in a second, and one on each side, sending it spinning towards us.

The Malays were getting nearer

every second. Their kreeses were held out at arms-length towards us, but we took comfort from the fact that we stood better out of the water than they did. Only for a moment, however, for the next they began to swim, faster considerably than we could run.

Thank Heaven, the native boat is up to us.

"Now, then, a couple of you to the other side, and hold it steady while we lift these women in.—Here, Morton: you are the tallest: take this boathook of theirs, and smash the first fellow who comes up."

A good lift, and the elder lady was got over the canoe's side, where, for a moment, she did the very best thing possible—lay down at the bottom. Miss Edwards had been put in by Morton first of all.

The boat's head was turned seaward, and all of us got in. Morton alone remained.

"Now, then, jump in!" sang out the boatswain; and before the Malays could get at him, he turned towards the stern, gave the boat a good push, and jumped up. I was in the stern, and managed to drag him in.

The foremost of our pursuers were swimming round us, perhaps a dozen in number. They, fortunately for themselves, kept out of reach of a boat-hook which the boatswain kept in his hand, for there was a look about the old fellow's face which boded no luck to the man who came within his reach.

But we made little progress. Our united weight had brought the craft so near the water's edge that we were all afraid to move lest we should capsize her. The oars used were the native paddles, something of the shape of a dessert-spoon with the bowl flattened. The Malays can use them better than oars, but we could do nothing with them, or at least could get but little way on the boat. Meantime the enemy was keeping up, some of the Malays even getting ahead of us.

"There's only one chance," said Morton: "somebody else and I must go overboard and push behind."

"It's what I've thought," said the boatswain. "Now, Jack, over with you."

Over the two went, while the boatswain on one side, and two more on the

other, stood with paddles aloft, ready to bring them down plump on the head of any one who should give us the chance. The Malays yelled with rage when they saw that in this way we managed to get along at a respectable rate. We shouted back to them; and even Mrs. Prime, from the bottom of the boat, where, as a matter of safety we kept her and her wet dress, did not fail to upbraid them as a set of ungrateful reprobates, "wretches who wanted civilization with a horsewhip," as she suggested to them, shaking her umbrella above the boat, and letting them see by that sign at least that she was still alive.

This was my first experience of a coral shore, and hence I could hardly at first believe we were moving when I saw the water scarcely growing any deeper. But as I gave a hasty glance, I could see, and be glad to see, the shore beginning to look more remote, and the ship becoming more visible.

At last we got Morton up to his neck, and had to get him in. Our pursuers still came on, though now not more than nine or ten of them; but they soon began to near us when Morton got into the boat. Distance from the shore, though we knew that there were plenty of sharks about, had no terrors for them. What we dreaded was that they should make a simultaneous attack on the boat; in such case, we should have been done for. One man could have capsized us. It was even dangerous for two to stand up to work the paddles. Obviously, it was difficult to get a good hit at anybody attacking. The fellows were nearing us again, when Morton suggested that he should try to scull—that is, to propel the boat by one oar, moving in the centre of the stern. There was no hole; but the boatswain, sitting on one side, and somebody else on the other, managed to hold their hands in such a way as to form a loop through which Morton could work his oar admirably.

Almost immediately we felt the boat give a start, and heard the pleasant music of the water rippling up against her head. We were out of danger in five minutes.

The captain was on the look-out for us, saw that something was wrong, and

was only too happy to find that the only loss we had suffered was that of his boat. However, we all felt that it was not improbable that we had not seen the last of them ; and the captain, on the boatswain's advice, sent out half-a-dozen men with his telescope to get a look at the native proa, the masts of which we had seen over a headland. This they were able to do without exposing themselves to any danger.

What the captain wanted was to be off ; but there was no wind, and would be none, in all probability, till late in the evening ; so we must needs wait, and all agreed that we might as well prepare for the worst. The report of the boat was decidedly unfavorable. The mate pronounced her to be as ugly-looking a craft as he had ever seen, and declared his opinion that she was full of pirates.

As dusk drew on, we saw her coming out from behind the point, and working her way slowly by means of oars towards us. Doubtless, the men had observed in their morning's visit, that we had nothing in the shape of guns to receive them, and were determined to attack us.

The captain called a council of war. Rather than be taken, of course we should fight. We were terribly short-handed, however, and could only muster eighteen men, including us passengers. Our first step was to take up every rope which hung over the bulwarks, and cut away everything by which ascent to the deck was rendered easy. Then we got our anchors ready on the top of the bulwarks to drop into their boats, should they give us the chance. The only arms we could muster were a couple of revolvers, two rusty muskets with good bayonets, and four harpoons in good condition—not much to meet fifty Malay pirates. But even now, I could not help remarking that the uppermost feeling in the men's minds was rather one of contempt for them than of vexation, still less of fear. The proa was drawing gradually nearer—was now within a mile. Not a breath of wind.

"We must try all we can to keep them from boarding, or else, in the dark, we shall not stand much chance against their numbers," said the captain ; and then, with a determination to put

the best face on the matter, he turned to Mrs. Prime, and asked her what she proposed to do with these miserable sinners.

"Indeed, and I don't know. It's a wicked world ; but if they should come here, will they murder us all—my dear responsibility too ? "

"They will, I am afraid, if we give them the chance. There's no use deceiving you. If these murdering villains take us, we shall never see friends again."

"Well, then, you must all fight them. It's a sad world ; but those Malays have tender feet, and go barelegged worse than even the little Irish children."

The captain and all of us laughed at this, without exactly knowing why. Milner, a little sharp-eyed fellow, was the only one who saw there was a point in Mrs. Prime's speech which we had not noticed.

"What do you mean by their having tender feet ? "

"Will those men jump off the sides of that vessel on to the deck here ? "

"Yes, of course. Why do you ask ? " said the captain.

"Well, you see there are those bottles."

The captain instantly saw her idea. Round our little poop were arranged hencoops, which had been pretty well stocked when we left Hobart-town, but which we had now almost emptied. We had grumbled a good deal at the space which they had taken away from the deck. The steward, being a careful Scotchman, had filled these coops, as they were emptied of their living occupants, with empty bottles. What was proposed to be done now was to break these bottles into tolerably small pieces, and strew them all over the deck, or at least wherever it was likeliest the Malays would come over. Our men, with their thickest boots on, would take no harm ; but the barefooted Malays, leaping over the bulwarks in a rush, as we fully expected they would, would probably disable themselves, and receive a check which we might turn to good account.

I don't know that any one could have avoided a shrug at the disagreeable means of defence we had to resort to. But there was no help for it. We had

to deal with an enemy whom we believed to be merciless, with men whose business is robbery and murder, and with pirates whose numbers we knew to be at least three times greater than our own.

Slowly, while we made our dispositions, the native proa was advancing. The broad band of violet which marked sunset had gradually faded away, and the sun had gone down beneath the rich green ocean with such a circling radiance of broad tints as is hardly to be imagined by those who have not seen a tropical sunset. Even on that day, excited as we all were, I could not but notice it. Gradually the warm golden light of the day had melted away into the cold silvery light of the moon. Still slowly the proa advanced.

We hardly knew how to pass the time. Perhaps it was two hours since the native vessel had begun to move towards us. It seemed ten. We were helpless. If we had had a cannon! We could not move. Our enemy could, though, fortunately, only slowly. Perhaps he had a cannon. We could not see one, but that was nothing. If only a wind would come, or if the enemy would have fought in the daytime! At least, if he would only be quick, and let us have this suspense over.

We are all in a group now, sailors and passengers; ready to fight and meaning to fight, the sooner the better. Have we nothing in our cargo that will help us? Alas, we have no cargo! We are going to China in ballast; our ballast being stones, perfectly worthless except as ballast, but costing more, in those early gold-digging times, the captain had often told us, than he could have bought rice for in Java or in India. Can nothing be done with the stones? Yes, at least let us have some ready to drop into their boats, if they give us the chance. Accordingly, stones about the size of men's heads, hard, angular blocks of trap and basalt, were brought up from the hold, and piled in readiness in one or two parts of the ship. Meantime, every one had furnished himself with the stoutest boots, and with such arms as he could get. The broken bottle notion had been carried into effect, and the glass had been so well sprinkled that it was impossible for a man to have

jumped from the bulwarks without alighting on a piece.

Darkness had come on; no light was hung from our vessel, and none appeared from the pirate. The moon was clouded, so that we could get no glimpse of his whereabouts, strain our eyes as we might. Miss Edwards and her guardian had been ordered—prevailed upon they could not be—to remain below, or at least to go there the instant any signal of attack was given. Neither of them showed any signs of fear. The elder one was indignant—though the word is far too weak to express the feeling—that any one should venture to attack a ship in which her charge was travelling; the younger one kept up conversation of apparently absorbing interest with Morton. I suppose such occasions invite confidences. There is the assurance to be given that there is no danger, or not *very* much, the common sympathy which begets confidence, and the pleasure of talking to some one about the all-absorbing topic. However this may be, I know an old bachelor, who declares the only time he genuinely made love was in a terrific gale of wind, a gale which had lasted already nearly a fortnight, and which had become so bad that the officers had entered their opinion in the log that the ship could not hold together four-and-twenty hours longer. Then it was that this unsentimental fellow began to make love in right earnest.

It was thought not unlikely that the Malays would attack us in three or four small canoes rather than from the proa itself. This is their usual mode, and has evidently many advantages when a surprise is intended. For a long time we looked in vain to see anything like a canoe, but at last we saw the faintest phosphorescence in the sea not far from the ship. It might have been caused by a shark, for we knew there were many about; but we anxiously watched for it again, and saw it in a few seconds yet more distinctly. Almost at the same moment we caught another flash in an opposite direction. Two canoes at least then were approaching. They managed well not to show more of that liquid fire through which they were cutting their way; but by dint of keeping their paddles well under water, we could only get a glimpse of them occa-

sionally. Evidently, they did not wish us to know from what quarter they were approaching. We should not have long to wait now.

Let every man take up his position. The captain with half of us was at the stern; the mate with the rest forward. Let all keep well together. Let all obey their leaders. If we are separated, we are lost. We have only now a few minutes at the most to wait.

One canoe we can see, another too, though the moon is still obscured. Here comes the land-breeze. Too late—we can't spare a single hand to go aloft and loosen sail.

I was standing near our little poop; the captain was looking anxiously over towards the sea, when a slight noise beneath him called his attention. Looking around, he found that outside the bulwarks the Malays were crowding and creeping around beneath the chains, ready for their rush. I heard his shout: "Now then, here they are; be steady." And immediately over each side of the vessel men came pouring like sheep over a fence.

Immediately shrieks ran from one end to the other, as the invaders, keeze in hand, jumped on the glass, and fell stumbling over each other, only to wound themselves still more. "Now, men!" But we needed no command. Following the captain, we went pell-mell into the Malays where they were most numerous. We struck wildly, but the enemy was so compact that we could hardly help hitting. Some jumped overboard, some fell over their fellows, and in a few seconds we had a heap of men before us—some wounded, some hit hard, others kept down by fear. Then to the other side, to find an enemy less numerous, indeed, than that we had thus vanquished, but recovered in part from the effects of the first shock on coming upon broken glass. We could hear that the mate with his party was fighting hard. A stiff stand-up fight with three times our number, better armed, but most of them more or less lamed. Shrieks, blows, cries of men who jumped overboard, and then a panic, in which most of them leaped over the bulwarks into the sea, and we had a moment's time to draw breath. The moon shone out bright and clear. Now to help the mate.

I saw Morton looking towards the head of the small staircase leading down from the poop into the cabin. At a glance I observed that our two lady-passengers had disobeyed orders, and had either remained on deck, or, unable to bear the excitement of the struggle above, had come to see how the battle went. Mrs. Prime had in her hand a belaying-pin—a good substitute for a policeman's staff. She had placed Ethel behind her, and was looking over the top of the staircase, as if expecting some one to come up. Instantly her arm was raised, and a heavy crack came down on the head of a Malay who was coming from the cabin. All this we saw almost at a glance. Morton rushed to the cabin, and I after him. Half-a-dozen Malays were coming up the steps. We fought at an advantage, and knocking one or two over, got down into the cabin, to find that the storm-lights had been broken, and a dozen men had entered. Never shall I forget the almost mad energy with which Morton flew at them. The men seemed to cower at his very look, and to fall before he touched them. A rush was made by them to the lights by which they had entered, and half of them went out before Morton had an opportunity of making their acquaintance.

An hour afterwards, our sails were shaken loose, the cool land-breeze filled them, and we were sailing away from the land. Wounds we had among us, but no one killed. We had sent a stone through the bottom of one of the Malay canoes, and had reduced the number of their crews very considerably; but need I say that we were glad to see the last of the pirate proa?

We had a good run to Hong-kong. The captain was complimented highly by his owners for his gallant defence—and he deserved the compliment; and all of us were made a three days' wonder of. Miss Edwards changed her name, and received on the occasion a present from her fellow-passengers, to which the ship's owners subscribed largely, "in consideration of her husband's ready assistance and distinguished bravery in defence of the *Mary Ann*." Mrs. Prime had a great work before her with the Chinese, which in some sense compensated for the loss of her "responsibility," and settled down into one of

the usual good-natured, lovable, pious old ladies to be found in every English settlement in Asia. A month afterwards we heard that the Dutch man-of-war, *Vice-admiral de Witt*, had captured a celebrated pirate proa off the coast of Guinea. "Several of her crew were found to be suffering from lameness, supposed to have been received in a late attack upon some ship, name unknown."

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Saturday Review.

MAN AND HIS DISENCHANTER.

Is there anything more poetic than woman? Is there anything more prosaic than man? The piteous little song has been chanted so often in our ears by lips so pretty and so infallible that it is hard to whisper a suspicion of its truthfulness. It is easier to take woman at her word, to credit her with high ideals, with delicate sensibilities, to mourn with her over the crash of this tender imaginative nature when it comes into rough contact with the coarseness of life and of man. There are moments when pebbly-hearted man flings his cigar away, as the little light shines out from Clarissa's lattice, and swears that he is a brute. It is too bad that that porcelain feminine existence should have to sail down the stream of life with such iron pots as we are. We are ashamed of our rough voice, of our little spurts of temper, of our hard, busy life, of our commonplace aspirations. Why do we find her verses so wearisome, why do we yawn over her little prattle of Charlie and papa? It is because we are sheer hard worldlings, because we have trodden out all that was tender and innocent in our own soul, and left nothing to respond to the innocence and tenderness in hers. So man, flinging away the end of his cigar, as he watches the little light in Clarissa's window, and sees the longed-for shadow flit across the curtain. And Clarissa laughs her assent to this abject self-condemnation. Her very defence of her lover plunges him deeper in the mire. It is so natural that he should be absorbed in business, poor fellow, and that business should prison him down to reality and prose. It is unjust to charge him with the general misfortune of his sex. Of

course he cannot quite understand her; of course he cannot wholly return a love so pure, so absorbing, so self-sacrificing as the love she gives to him. Her extenuating circumstances put a graceful fringe round the ugly verdict of guilty, but sentence is recorded none the less. Self-condemned, we watch beneath the casement, and fling away our meditative cigar for the last time. We stand before the altar, and poetry comes surging up the aisle—the poetry of bridesmaids, the poetry of the bride. How white, how tearful, how confused! The very church, with its stuffy pews and its dusty galleries, brightens up into a certain romance. The very mob of lookers-on hush their gabble into whispers of awe and pity as she passes by. But not a ray of all this poetry lightens upon us. We stand there simple prose. We feel that we spoil the grace of the picture. Our "I will" rings out dissonant and unmusical. Then we are swept into a corner, while sobs and embraces complete the sacrifice. It is a victim that we lead away, and we lead her away with the self-consciousness of a Calcraft. It is a victim who sits beside us at the wedding-breakfast while scores of eyes glare incredulity and scorn as we stammer out our promise to treat her as well as we are able. The lucky slipper allows us to take refuge in our honeymoon. We have pictured it all long ago in those hours of contrition beneath Clarissa's window. What are we to do with this poetic being? How are we to amuse her, to interest her? We have put a Tennyson in our travelling-bag. We have coached up Wordsworth, and have a couple of stanzas ready for the first sight of Helvellyn. Her shyness will pass away after a time, and we shall be at her feet, and listen to the hoarded treasures of her soul. A new life is before us, and even the study and the counting-house will catch a little of the glow. A gentle influence will be round us, and our selfishness, our coarseness, our worldliness will insensibly fade away. If we can only be tender and good-tempered! if we can only get rid of our fretfulness and impatience! It is with a pocketful of good resolutions, of golden incoherent hopes, that prose whirls away with poetry to the lakes or to the sea.

It is with fewer hopes and slightly different resolutions that prose and poetry whirl back. A new drama has to be played, and it is not surprising that the actors have changed parts. At any rate the bridal return finds prose under the bonnet and poetry under the hat. It is the bride who pronounces her husband quixotic and ideal. It is the bridegroom who takes refuge behind his *Times* from the chilling common-sense of his wife. He is puzzled, and he is angry at his puzzlement. He has a dim idea that the whole affair has been a mystification. It is impossible that the angel of his dreams can have turned into the woman of the world who lies yawning in the opposite corner of the compartment. It is impossible that that tender and delicate nature can in an hour have developed into obstinacy and commonplace. He knows that the weariness and dulness on the face before him will be readily translated by the world. She is going, people will say, through the most common of the disenchantments of life—a wife's disenchantment as she discovers what a brute she has married. But is it not as common a disenchantment for the husband as for the wife? Why is it that he is haunted by the memory of that last night of freedom and of his annoyance at his friend's farewell, "You are going to put your foot in it to-morrow?" He certainly has put his foot in it, and yet it seems incredible that a month can have done it all. There is a strange irony in the contrast between the honeymoon of his fancy and the honeymoon of fact. There has been very little of the expected alternation of caresses and romance. The angel has from the very outset turned into a spoilt child. After so many months of compulsory good behavior, of unchequered sunshine, it is an immense luxury to her to find herself free to live her natural little life of pouting and petting. And so she brings to the paradise of expected bliss the frowns and the sulks of the nursery. She takes out her freedom in a thousand caprices, and tempers, and whims. But, after all, hope isn't killed in an hour, and it is possible to be patient. The real difficulty is to be entertaining. The one thirst of the young bride is for amuse-

ment, and she has no notion of amusing herself. If she yawns, if she feels sleepy and bored, she looks on the breakdown of the vague anticipations with which she married as an injustice and a wrong. It is amusing to see the spouse of this ideal creature wend his way to the lending library after a week of idealism, and the relief with which he carries home a novel. But the novels are last season's novels, and life is soon as dreary as before. How often in those nights of expectation has he framed to himself imaginary talks over the fire, talk brighter and wittier than that of the friends whom he forsakes! But conversation is difficult in the case of a refined creature who is as ignorant as a Hotentot. He begins with the new Miltonic poem, and finds she has never looked into *Paradise Lost*. He plunges into the Reform Bill, but she knows nothing of polities, and has never read a leading article in her life. He tries music, and she kindles a little at the thought of hearing Nilsson again next season, at least if there is a royal princess in the house. Then she tries her hand in turn, and floods him with the dead chat of town, and oceans of family tattle. He finds himself shut up for weeks with a creature who takes interest in nothing but Uncle Crosspatch's temper, and the scandal about Lady X. Little by little in that fatal honeymoon, the absolute pettiness, the dense dulness, of woman's life breaks on the disenchanted devotee. His deity is without occupation, without thought, without resource. He has a faint faith left in her finer sensibility, in her poetic nature; he fetches his Tennyson from the carpet-bag, and wastes *In Memoriam* on a critic who pronounces it "pretty." He still takes her love of caresses as a sign of an affection passing the love of men, and he unfolds to her his hope that a year or two more may give him the chance of a retreat into the country, and a quiet life of conjugal happiness. The confession startles the blighted being into a real interest at last. She has not escaped from the dulness of the nursery to plunge into the dulness of home. She amuses herself with her spouse's indifference to all that makes life worth the living. But then men are such odd creatures, so

Quixotic, so unpractical, so romantically blind to the actual necessities of life! It is this idleness, this boredom of the honeymoon, that begets dreams so absurd, so fanciful. The dear, odd creature must be got back to town, to his business, to his books, and the honeymoon must end. It is time, in fact, that it did end, for boredom has done its work, and the disenchantment of man is complete.

Absurd, fanciful as these dreams of a rural future may be, they have startled the poetic being into the revelation of her own plans of life. As you whirl home together, she tells you all about them with a charming enthusiasm, but with the startling coolness of a woman of the world. They are not the crude fancies, like your own, of a moment of romance. Long ago in those hours of mysterious musing, when her lover watched her figure at the casement, she was counting the cost of the season, the number of her dresses, the chance of a box at the Opera, the cheapest way of hiring a brougham. That morning of saddest farewell, when both walked hand in hand through the coppice with hearts too full for even a word of affection, she was laying her plans for eclipsing her married cousin, and forcing her way into Lady Deuce-ate's set. One sees dimly as the honeymoon ends, what an immense advantage this poetic being has gained over her prosaic spouse in the completeness of her previous study of the position. In the presence of his confused dreams, her practical well-arranged plan of life gives her a lead that she means to keep. She is reasonable, of course, ready to listen to objections if those objections are based on a plan not absolutely romantic and absurd. But the hard, coarse, masculine creature refuses to reason, and buries himself in his *Times*. Reasoning, calculating, planning—this was the very life from which he had fled to fling himself into the arms of his ideal. He is mystified, puzzled, indignant. His dim conceptions of imaginative woman float sadly away, but they leave him no formula to which he can reduce this hard cynical being who has taken her place at his fireside. Woman, on the other hand, is far from being puzzled or mys-

tified. It is part of her faith that she thoroughly understands her husband. There is a traditional theory of spouses that one feminine generation hands down to another, and into this theory he is simply fitted. While he was flinging away his last cigar, and confessing his worldliness and unworthiness, she was taking from mamma a series of practical instructions in the great art of managing a husband. The art is somewhat like the Egyptian art of medicine; it is purely traditional, and it assumes a certain absolute identity in the patients, which the patients obstinately deny. But woman clings to it with a perfect faith, and meets with it every problem of domestic life. She knows the exact temper in which her spouse had better be induced to go to the club; she knows the peculiar mood in which he had better be let alone. The same frivolous creature, who lay sulking on a sofa because the honeymoon was dull, wastes the patience and skill of a diplomatist in wheedling her husband out of his season on the moors. Her life is full of difficult questions, which nothing but tact and time can solve—questions like the great question of husbands' friends, or the greater question of husbands' dinners. The exact proportion in which his old acquaintances may be encouraged to relieve him of the sense of boredom at home, without detaching him absolutely from it, the precise bounds within which his taste for a good dinner may be satisfied without detriment to that little bill at the milliner's—these are the problems which the poetic nature is turning over as she bids, farewell to the honeymoon. The poor iron pot has no particular fears now of the possible consequences of a collision with the fine porcelain. He finds himself floating whichever way he is guided; wheedled, managed, the husband—as women tell him—of an admirable wife. He does his weary round of work, pumping up the means for carrying out her admirable projects of social existence. But the dreams, the romance, the poetry, the sentiment—"where," as the song runs, "where is last winter's snow?" He thinks sometimes of other things that turned to dust with the ashes of that last cigar. Is there anything more poetic than woman? Is there anything more prosaic than man?

All the Year Round.

LUNAR ASSISTANCE.

SUPPOSE for a moment, that we are all transported to the bottom of the sea, there to occupy a position analogous, in respect to the waters of the ocean, to the position we hold in the lowest portion of the atmosphere. How can we form any idea of the tides that ebb and flow above us? Our only way of obtaining cognizance of the fact would be to measure the thickness of the mass of water overhead, by means of some instrument analogous to the barometer.

Let us now go up again to the surface of the earth—to the bottom of the aerial ocean which covers the whole earth. The same observations, made with the barometer, acquaint us with the existence of tides in the atmosphere. But here we have a *continuous* ocean, whose oscillations, restrained by no barrier, are not amplified by confinement in a narrow channel, as happens in the ocean of waters, through the resistance which continents oppose to their movements. We have, moreover, an ocean consisting of a fluid incomparably less dense than the waters of the sea. Taking these circumstances into consideration, we find that the periodical variations of pressure due to the tides of the atmosphere ought to occasion, in the height of the barometric column, variations amounting, at most, to the fiftieth part of an inch!

What, now, of lunar influence upon the weather? Daily observations show that, in the same place, the height of the mercury in the barometer may vary by a quarter of an inch and more, without any great disturbances ensuing. If the tides in the atmosphere, caused by the moon, have any share in these variations, it must be so very small that certainly it cannot authorize weather prophets to found their predictions upon changes of the moon.

But if the moon will not enable us to foretell rain or sunshine, she does help us to fix historical dates and to correct our ancient chronology.

In an eclipse of the sun, the moon screens the sun, either totally or in part, from certain portions of the earth's surface. Here, it is total or annular; there, it is only partial; further on, not a trace of it is witnessed. In an eclipse of the

moon, on the contrary, the rays of the sun are totally or partially intercepted from the moon by the earth's interposition; and this privation of light is seen in the same way from all points of observation.

The ancients (who had nothing like so precise a knowledge as we have of the moon's movements) were unable to predict eclipses of the sun. They foretold lunar eclipses only; basing their predictions on the fact that those eclipses are reproduced almost periodically, presenting the same characters and the same intervals between each other, every eighteen years and eleven days. It therefore sufficed to have observed and registered all the eclipses of the moon happening during that period, to be able to announce with certainty the eclipses which were to occur during the period following. Now, on the contrary, with the much more exact information which we possess, not only of the moon's motions but also of the sun's, we are in a position to calculate and announce a great many years and even centuries beforehand, both the general circumstances of lunar and solar eclipses, and also all the peculiarities which the latter will present at any given spot on earth. In like manner, by a retrospective examination, we can give an account of all the circumstances accompanying ancient eclipses in this or that locality.

Eclipses of the sun are somewhat more frequent than those of the moon. But as a solar eclipse can never be visible over so large a portion of the earth's surface as a lunar eclipse, it follows that, for any one given spot, solar eclipses are least numerous. And if, instead of noting *all* solar eclipses, we only reckon those which are total, we shall find that, at the same spot, they are very far from numerous. We may even say that, for any determinate locality, total solar eclipses are veritable rarities. In Paris, for instance, only one was seen during the whole of the eighteenth century—the eclipse of 1724. In the nineteenth century there has not been, nor will there be, one. The Londoners were five hundred and seventy-five years without one total eclipse—from the year 1140 to 1715; and since 1715 they have witnessed no similar spectacle.

If history mention a total eclipse of

the sun as having been observed at a given spot, without giving the precise date of the observation, that date may still be determined by the exact knowledge we now possess. Recurring to the epoch to which the phenomenon belongs, we successively pass in review the different solar eclipses which occurred during a lapse of years of such extent, that we are certain it must comprise the year in which the eclipse in question was observed. By proceeding in this way we shall generally find that, out of all those eclipses, there is only one corresponding to that recorded in history; because that one only can possibly have been total at the spot where the observation was made. We shall thus get, not merely the year, but the day and even the hour, of the observation.

Take an example. Herodotus relates (book i. § 74), "After that, the Lydians and the Medes were at war during five consecutive years. In this war the Medes frequently vanquished the Lydians; the Lydians also often beat the Medes. On one occasion they even fought by night. Now, as the war continued with equal chances on either side, in the sixth year, one day when the contending armies were engaged, it happened that, in the midst of the strife, the day was suddenly changed into night. Thales of Miletus had foretold this phenomenon to the Ionians, indicating the exact year in which it actually did take place. The Lydians and the Medes, beholding night suddenly interrupt the day, put an end to the combat, and thought only of settling the terms of peace."

The eclipse here referred to, is known as Thales's eclipse. The various authors who have mentioned it have assigned to it very different dates, from the 1st of October, 583 B.C., by Scaliger, to the 3d of February, 626 B.C., by Volney. Professor Airy, by proceeding as indicated above, and taking advantage of the most recent data respecting the lunar movements, has decided that this eclipse occurred on the 28th of May, 584 B.C.

Between the earth and the moon there exists one grand difference. The earth has an atmosphere; the moon has none. She has no clouds, snows, nor dews—contrary to the theories of the elder astronomers. Kepler, and Galileo, held the moon to be encompassed with a

heavy and elastic atmosphere: alleging, among other proofs, that the moon sometimes disappears in a clear sky, so as not to be discoverable by the best glasses (of that day): little stars of the fifth and sixth magnitude remaining visible all the time.

Kepler says that he has observed this phenomenon twice—once in 1580, and once in 1583. Hevelius did the same in 1620. Ricciolus and other Jesuits, at Bologna, and many people throughout Holland, observed the like on the 14th of April, 1642. And yet at Venice and Vienna the moon remained, all the while, conspicuous. On December 23, 1703, there was another total obscuration of the moon, which must not be confounded with an eclipse. At Arles, in France, she first appeared of a yellowish brown; at Avignon, ruddy and transparent, as if the sun were shining through her. At Marseilles, one part was reddish, the other very dusky; "and at length, although in a clear sky, she wholly disappeared." Here it is evident, they say, that as the colors appear different at the same time, they do not belong to the moon herself, but are occasioned by an atmosphere around her, variously disposed in this and that place, for refracting these or those colored rays.

Lord Rosse's telescope has stripped the moon of her atmosphere, leaving us still enveloped in ours; and we have only to observe what is daily passing before our eyes to understand the changes which the atmosphere has produced on the solid crust of our globe. The hollows are filled up and smoothed over by sedimentary deposits brought down by rains; the relief of our surface is gradually worn down. The moon is as a medal fresh from the mint; the earth is as a shilling which has sustained the effects of passing for years and years from pocket to pocket.

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Belgravia.

THE PORTRAIT'S WARNING.

BY H. SAVILE CLARKE.

My friends the Mainwarings lived in Gordon-square, London, in the west-central district, and Mr. Mainwaring, a stout gentleman of fifty or thereabouts, was a musician; that is to say, he gave

lessons in music, was the author of a number of songs and pianoforte pieces, and a performer of some note on the violoncello. They lived in very good style, as he had some little property in addition to his professional earnings; and the family consisted of father and mother, a lad at school, and a daughter Ellen, who at the time I am writing about had just reached the fascinating age of nineteen.

For myself I was studying medicine, and expected in a few months to pass the College and Hall, and then settle down in a country practice near my father. I had a good many friends in London, but with none was I so intimate as with the Mainwarings; and I must confess that the attractions of Miss Ellen had to answer for a good deal of non-attendance upon lectures, and for my presence in the family circle two or three times a week when I was in town. Mr. Mainwaring was an old friend of my father's, and on that account, and also because I was passionately fond of music, I was a great favorite of the composer's, who used to drag me off to listen to long solos, when I longed to be talking with Ellen, and hearing the more exquisite music of her voice.

It was a pleasant house to visit at, for Mr. Mainwaring knew many literary and artistic celebrities, and was himself a highly cultivated man, and not wholly wrapt up, like some professors of his art, in musical doings and his own compositions. Mrs. Mainwaring was pleasant and motherly; and as for Ellen—it was occupation enough for any man just to sit and look at her. She was rather tall, with dark hair, and eyes that looked at you from under their long lashes in a most bewildering way; she had the sweetest little mouth in the world, and she carried her small head as gracefully as an antique statue.

The house was well furnished, and Mr. Mainwaring had an artistic but rather expensive mania for pictures; and hundreds of them, in oil, water-colors, and chalk, hung about the rooms, and in some of the passages. Of portraits, especially, he had a great number, not only of historical personages, picked up at various sales, but of his own friends and family, and among them several of himself. I don't like a man having a

portrait of himself in his room, especially if it is really well-painted and a good likeness. It always gives me an uncomfortable ghostly feeling, as if he had his *double* in the house, silently watching people from the canvas and endowed equally with himself with life and understanding. I speak to the man, and then catch myself looking up at the portrait for an answer; or if a thought unfavorable to him crosses my mind for an instant, I always have an uncomfortable feeling that the portrait will know of it. A man with a good likeness of himself on the wall has me, I consider, at a decided disadvantage; it is not exactly two to one, but he is endowed, at least to my fancy, with duplicate characteristics and double powers.

Mr. Mainwaring had one portrait of himself hanging in his drawing-room which I held in especial detestation for this very reason. It was an absurd idea, for the picture was an excellent likeness, by a famous artist, and meritorious as a work of art apart from its merits as a likeness. And yet I could not endure it, although I had never dared to mention my aversion to the family, who were very proud of it; and it hung, as I said before, in the drawing-room, and in a very conspicuous place. I used to catch myself watching it when Mr. Mainwaring was by with a superstitious feeling that it was on the watch, and its presence seemed to cast a shadow over the pleasant room in which it hung. This feeling haunted me from the very first, and I little knew then what terrible reasons I should have for aversion to that portrait, and what a fearful event would make its canvas suggestive of saddest memories for ever.

I often wondered whether Ellen shared this curious and morbid feeling about that particular picture; and I called up my medical experience and reading, to see if I could find any account of persons so affected. Was it nervousness consequent upon a weak state of health? Hardly that, as I was unusually strong, and by no means of a nervous temperament. Hard study might have made me nervous, but I was also a great man for athletic sports and exercises, and so did not overwork myself. There was absolutely nothing to account for my vague horror and dislike of Mr. Main-

waring's portrait, and I tried in every way to dismiss the feeling from my mind, until it was again roused in a manner that I can only regard as supernatural. My story may be difficult to believe, but the truth has been stamped in letters of fire upon my mind; and although I do not profess to explain the appearances I am about to describe, their occurrence is sadly and indubitably true.

I called one day at the house in Gordon-square, and when the door was opened, Mr. Mainwaring, who was in the passage, came rushing up to me with a sheet of music, and said, "My dear Raymond, I am so glad to see you! I've just written such a delicious barcarolle, and you must come upstairs directly and hear me play it."

I of course assented, not without some speculation as to whether Ellen would be in the drawing-room also; but in that I was disappointed, and instead of looking on her dear face, my eyes fell immediately upon that of Mr. Mainwaring's *double*, the hated portrait.

Mr. Mainwaring went to the piano, and I turned my back upon the picture while he began playing his new composition. It was a beautiful air, quaint and original, with the repose of moonlight in it, and the sound of rippling waters; the song of the gondolier in that "glorious city by the sea," where

"The sea is in the broad, the narrow streets,
Ebbing and flowing, and the salt seaweed
Clings to the marble of her palaces."

As the composer went on playing, wholly occupied by the music, I happened to turn round absently while listening to it, and so came to see the portrait again.

It was lighted up by the sunshine which streamed through the window, and the face looked as if it was covered with blood. I should say more correctly, half the face, the left side of it; and no words can describe the horrible appearance it presented.

I could hardly control myself sufficiently to prevent Mr. Mainwaring noticing my fright; but he happily went on playing unconsciously, and in a few moments I slightly changed my position in the room, and again looked at the portrait.

Once more the painted eyes looked into mine, and the likeness almost seemed

to speak; and I saw again the ghastly appearance on the left side of the face, as if it had been severely battered and bruised.

I rubbed my eyes, and tested the perfectly healthy condition of my sight by looking at other things; but whenever they travelled back to the likeness I still saw the left side of the face covered with blood. It was horrible to stand there and look from the living man to the portrait with the terrible appearance; and in a short time I made an excuse and departed. No one saw the appearance but myself, for Mrs. Mainwaring came in just before I left, and called her husband's attention to some flaw in the gilt moulding of the frame; and they both looked at the picture and made no remark upon it.

I hurried from the house with a vague and uncomfortable feeling of alarm in my mind; but I gradually argued myself out of it, and began to believe that I had been deceived by some optical illusion—colored light from some cause or other falling on the picture, or a refraction from the lustres of the chandelier.

I was very busy for about a week after the occurrence, and had dismissed it wholly from my mind, when one day I found a telegram on my table. It ran as follows:

"Mrs. Mainwaring to Frederick Raymond. Mr. Mainwaring has had a bad accident; please come directly."

I lost no time, of course, in hastening to Gordon-square, and arrived there just as another medical man drew up at the door.

We went up stairs together, and the other doctor must have thought very little of my nerves, for on seeing the patient I started back in alarm.

Mr. Mainwaring was lying on the bed, and the left side of his face was cut and bruised; it was the appearance of the portrait reproduced on the face of the original.

And then I knew that the appearance had been an omen of disaster, and shuddered when I thought of the horrible gift I possessed of being alone able to see it.

Mr. Mainwaring had fallen on a crossing in Holborn, and his head was much hurt. I stifled the feeling of horror his

injuries had at first aroused in me, and we proceeded to dress his wounds and make him comfortable ; they were happily not serious, and it was soon done.

It was the summer after Mr. Mainwaring's accident, from which he had recovered with no lasting injury to his face, and Ellen Mainwaring had promised to be my wife. I had not in the interval seen any return of the portrait's warning, and I had mentioned the former appearance to no one, not even to Ellen. If it ever came again, it would be time enough, I thought, to take her into my confidence ; there was no occasion to alarm her needlessly.

We were sitting together one afternoon, when her father came in to tell me about their plans for going out of town in the autumn, and suggesting that I should, if possible, join them in their seaside quarters. I was trifling with some fancy-work of Ellen's while he was speaking, when, on looking up, my gaze was attracted to the portrait behind him, and once more I saw the horrible appearance, but this time the whole face seemed to be covered with blood, as from some terrible wound.

I must have looked strange and startled, for Mainwaring suddenly said, "Are you ill, Fred ? You look very white !—Ellen, get him a glass of sherry ; he looks as pale as death."

Ellen manifested great anxiety, and when her father had left the room, she inquired tenderly what was the matter with me, and I resolved to tell her all. But first glancing at the portrait, I saw that with Mr. Mainwaring's departure the appearance had gone too ; but I did not doubt that if he came in again it would return.

And then I told Ellen the story of the first appearance, and how it had been followed by her father's accident, and how his face had been disfigured exactly as I had seen the face of the portrait.

She glanced fearfully up at it as she said, "And papa is going to the seaside to look after some lodgings for us ! He thinks of going out of town now for a little time ; and then late in the autumn again."

"A railway journey !" I said, aghast. "Can't we prevent it ?"

"It would be of no use telling him about it at all," she said sorrowfully, "even with the corroboration the first appearance received. He would only laugh at it, and would never think of putting off his journey."

I knew that too well, but I felt at the same time that some disaster was sure to happen whether he went or not.

At last I said, "Ellen, if your father does go next week, I'll go with him ; I shall then be at hand if anything does happen to him."

"O no," she said at first ; "I am frightened for you too !"

"But the appearance did not concern me," I returned ; "so there will be no danger ; at least, none of any special kind."

In the end she consented ; and when the appointed time came, Mr Mainwaring and I were speeding out of London in a first-class carriage, and swiftly leaving the city, fast breaking into lines of light, behind us. He was in good spirits, congratulating himself upon having me for a fellow-traveller ; but it was with difficulty that I could answer him in the same spirit, for the memory of the fatal appearance made me nervous, and filled me with gloomy forebodings.

It was a fine night, and the rapid motion as we whirled along had an exhilarating effect even upon me, depressed as I was. Every small station that we passed, marking a stage in our journey, gave me a sense of relief : my companion had got so far on his way in safety, and might continue so to the end. It was strange, seeing that any accident would probably be of an utterly overwhelming nature, that I had no fear on my own account ; but the strong possibility of danger for my friend precluded all idea of it for myself.

We were passing through a deep cutting, so deep that it shut out all sight of the sky, when the carriage in which we were seated began to oscillate fearfully. Suddenly the engine gave three short sharp whistles : I knew what was coming, saw Mainwaring throw himself kneeling on the floor of the carriage,—then came a crash, a deafening noise, and I knew no more.

When I awoke to consciousness, I was lying on the side of the embankment

completely jammed into the ruins of the carriage : I heard shrieks and groans on all sides, and men were rushing about with lanterns among the débris of the train.

I was bruised, I felt, from head to foot, but, as I found while I was getting out of the splintered timber, no bones were broken ; and I turned to assist those who were in a worse plight than myself.

I moved to do this and to secure a lantern, when my foot caught against something, and a guard coming up at the time said, " You've had a narrow escape, sir ; but I see here's another poor fellow dead."

There was no need for him to lower his lantern to the still face. I knew what he had to show me. I had seen it seven days before in a London drawing-room.

Mr. Mainwaring was lying at my feet, and his face was covered with blood, from a frightful cut across the temples.

The warning of the portrait had again come true.

I had been terribly shaken, and I was very ill for weeks after the accident ; and poor Mainwaring had long been buried, when I received a note from Ellen. I had not heard anything of them, and had written once or twice, thinking it strange that none of them had written, and I seized the black-edged envelope eagerly. The note was very short, and ran as follows :

" The portrait told the truth. You must judge me as kindly as you can, but we can never marry. My father's grave lies between us.

" ELLEN MAINWARING."

I was still very weak, and had not been out since I was laid up ; but within an hour from the time of receiving the letter I stood in the drawing-room in Gordon-square, and had not been there many minutes when Ellen entered. Her black dress startled me for a moment, and then I said, holding out the note,

" I do not forget your great sorrow, Ellen, but am I to believe this ? "

" I wrote it," was the reply, and her face was cold and stern.

" But I cannot believe it," I said passionately ; " you cannot be so cruel.

Heaven knows I would have died in his stead to save you pain."

She shuddered when I spoke, but made no reply.

" Ellen," I said, approaching her, " I had dared to hope that my love might in some measure lighten, when years had gone by, your heavy sorrow. It is my sorrow too. Have you no word for me ? "

I drew still nearer, but she made a gesture of aversion, and then said in a constrained and hard voice,

" You have my letter ; there is no need for me to say anything."

" No need ! " I returned bitterly, " no need for more, when you promised me love, and I believed it true ? If any living man had said I should meet with this reception, I would have told him he lied. If I had died, I might have had one kind thought from you ; but now you will not speak to me ; " and I leant upon the mantelpiece, and hot tears sprang to my eyes as I buried my head in my hands.

When I raised it again she was gone, without a word or sign. I took up the cruel letter and staggered to the door. I hardly knew how I reached home, and again for weeks I was prostrated with a renewed attack of illness, which proved to be brain-fever.

When I recovered, I got appointed surgeon to a whaler, and for three years I heard but little home news, and nothing whatever of the Mainwarings.

At the end of that time I returned home, and with all the old love for Ellen in my heart. I had tried to forget her ; I had kept the letter, and tried to steel my heart against her by reading it over, and calling to mind her heartless conduct ; but all in vain. I could only remember the charm of her presence in the early days of our love, when I knew her love for me was as fervent as my attachment to her.

The evening after I arrived in London I wandered into Gordon-square, but I found the house shut up, and a placard announcing it to let. I was bitterly disappointed, although I had had no intention of calling, but a vague hope of seeing Ellen had led me there ; and I had to go back to my hotel, feeling very sad and lonely.

I had come into some property by the

death of an aunt during my absence, and on calling on her solicitor, who was an old friend of mine, I found it was far more considerable than I had expected; making me, in fact, independent of my profession. Mr. Lee kindly asked me to dinner, and hinted at a small dance afterwards; and as anything was better than moping about in town by myself, I promised to go, and presented myself at his house at the appointed time that evening. We had a very pleasant dinner; Mrs. Lee was kind and chatty, and the daughters lively and good-looking, and very curious about my whaling experiences, which I had to narrate at some length.

Mr. Lee and I sat for some time over our wine, as we had more business matters to discuss, and dancing had commenced when we went up-stairs. I declined to dance at first, and sat down alone in a window-seat rather screened by a curtain, and watched the bright figures fitting about. In a little time I heard a request for music, and some one sat down to the piano to play.

I could not see the performer, but after a few masterly chords I was beyond measure astonished to hear poor Mainwaring's barcarolle, the one he had played to me on the day of the first fatal appearance, and which was always associated in my mind with the beginning of my sorrow. I supposed it had been published; and it was evidently a favorite of the lady who was at the piano, for she played it with great feeling and expression.

I bent forward past the curtain till I could see the player; her back was towards me, but a thrill went through me as I recognized something familiar in the pose of the shapely head, the smooth white shoulders, and even in the flowing black drapery.

It was Ellen Mainwaring. No need for her to turn after the final chord, to make me sure of her. No need to show me the face that had been with me in dreams ever since she had left me in my agony, with the cruel letter in my hand. It was Ellen, more beautiful than ever, with added grace and refinement from sorrow; and all my old love came back upon me with a passionate intensity to which my heart had long been a stranger.

How did she come to know the Lees? She had not been acquainted with them in the days when I first knew her: but how thankful I was that I had accepted Mr. Lee's invitation!

When she rose from the piano, Mrs. Lee went up to her and said, "Now, dear, you must be tired; come and sit by me;" and they came and sat down close to my hiding-place. It seemed so strange to be sitting there within a yard of her, and not to have the right to approach her, as in olden times. I could not escape without disturbing them, so I sat still.

Suddenly Mrs. Lee exclaimed, "Dear me, where is Mr. Raymond? I have never seen him since he came in from the dining-room; I want to make him dance;" and then growing confidential, she added, "he is a client of my husband's, Nelly, and as he is young and well-off, I feel it my duty to find him a wife; and if he stays in town long enough, I daresay I shall manage it."

"Who did you say was here?" said Ellen, faintly.

"A Mr. Raymond, Fred Raymond; perhaps you never heard of him. I didn't know you before he left England. But what is the matter, Nelly?" she added, seeing Ellen look deadly pale. "My poor child, are you ill?—let me get you some wine or sal-volatile."

"No, thank you, no wine; but I am not very well. I think, if I can find my cousin, I will go home."

"Well, dear, sit where you are," said Mrs. Lee, "and I'll go and bring her."

She bustled off into the next room. I went forward and looked at Ellen. She sat quite still; her face was death-like, and her small white hands were tightly clasped, as if the nails would be forced into the flesh. It was evident she was suffering from some strong emotion. I could not bear to see it, and at the risk of a second repulse, I came forward. She looked up and slightly started.

"May I sit here?" I said, taking Mrs. Lee's vacant chair.

She did not speak, although her lips moved; so I continued:

"I am afraid I startled you, Ellen; but you must believe that I would not have annoyed you by my presence if I had known you would be here to-night. I did not know you knew the Lees; but

you must forgive me for not being able to see you without speaking to you."

She still sat with her hands tightly pressed together and her head bent down. I fancied that once more I was to have no answer, so I half-rose and said,

"I am going to leave town to-morrow, so that you need not be afraid of meeting me again."

Still she did not speak, and I rose to go away quite heartbroken. I had prepared myself for this, I thought; but the reality was more than I could bear. I had made a step to go, when I heard her say in a choking voice, "Fred."

I turned immediately, and sat down again, and then, seeing that she was almost overcome, I silently offered her my arm, and we went into a small room off the principal suite.

When we sat down she was sobbing violently, and I did not dare to comfort her till I knew my fate. At last she grew calmer, and I said, "Ellen,—forgive me, but I cannot say Miss Mainwaring,—I do not want to trouble you now, but may I call on Mrs. Mainwaring to-morrow?"

"Mamma!" she almost screamed. "O Fred, didn't you know that mamma—"

And her sobs and black dress told me the rest.

"My darling," I said, "will you forgive me? I ought to have known—I ought never to have gone away. How you must have suffered!"

"I have, I have," she said through her tears.

"Will you forgive me for going away?" I said, "and—"

"O Fred, don't talk about forgiveness; can you forgive me for my wicked injustice? I was nearly mad when you left me."

In another moment she was in my arms, and a long kiss told our mutual forgiveness.

Three months after that time we were married, Mrs. Lee insisting upon giving the wedding-breakfast, and declaring that the match was entirely of her making, and that it was all nonsense for us to say that we had known each other before.

One fact remains to be stated about the picture which had foretold so much sorrow. On the day of Mrs. Main-

waring's death, which happened very suddenly, it fell down, and striking against a table in its descent, the face of the picture was utterly destroyed. "And so you see, dear," said my wife, "we can never again be frightened by the portrait's warning."

Colburn's New Monthly.

IN DIFFICULTIES:

A TALE OF REAL LIFE.

ABOUT two years since, a very intimate friend of mine, some years my senior, related the following story to me. I think I cannot do better than give it in his own words, for while it amused, it at the same time made such an impression on me, that I paid off divers small debts I had hitherto neglected, and have since never allowed myself any luxury I could not pay for.

I trust this tale may prove as amusing, and perhaps as profitable to some of my readers as it was to me.

When I was about twenty-two years of age I was in the army; although I was not rich I was very well off, as my friends gave me an allowance of two hundred pounds a year; but as I was very thoughtless and very extravagant, I spent considerably more than this, allowing my half-yearly bills to remain unpaid. In a short time, however, some of my tradesmen applied to me for payment, threatening to apply to my relations if I did not comply with their demands. In order to avoid the remonstrances of my family, and because it was far easier, trusting also, perhaps, in a lucky hit on the Derby, I borrowed money at high interest on my commission—in short, in about eighteen months I found I owed about a thousand pounds. The money-lenders were clamorous for payment, threatening to arrest me, so I was at last compelled to apply to my friends; they, however, firmly refused to help me in any way, telling me that as I had involved myself so deeply, notwithstanding the liberal allowance I received, it was clear the army was too expensive for me, and that I had better give it up. I was obliged to sell my commission, which realized about eight hundred pounds, but as it was assigned or mort-

gaged for that amount to some of those who had advanced me money, they were paid, and my unfortunate tradesmen received nothing. My friends declined paying them—their claim being about two hundred pounds—reduced my allowance to fifty pounds a year, and allowed me to reside with them until I could obtain some appointment which would enable me to pay my debts. They also told me that until I had done this and so redeemed my character, they would do nothing for me, as they could place no confidence in my promises.

You see I was already beginning to reap some of the fruits of my extravagance. I had left the army, which was the only profession I then thought I could ever like, and my means were diminished; but I was not yet sufficiently punished to induce me to set to work in earnest.

So I remained in London, living in a luxurious home, frequenting many of my former haunts, associating with my friends, going to my club—in fact, doing nothing, and trying to persuade my friends and myself that I was endeavoring to obtain some sort of an appointment. This went on for about six months, until my creditors, losing all patience, informed me they would actually arrest me if I did not pay them. This gave me considerable anxiety, although I did not think they would proceed to such extremities. However, I took the precaution to give orders to my aunt's servants to say, if any one called for me, that I was out of town. I meditated going away, but knew not where to go. I had no friends out of London, and of course it was absurd to try and live on my allowance. I spent that in cigars and gloves alone.

One evening, at about seven o'clock, just as I had come down dressed for dinner, and was crossing the hall to go into the drawing-room, I saw the butler open the street-door, and, not having yet had time to close the drawing-room door, overheard the following dialogue:

"Is Mr. —— at home?"

"No. He has just gone abroad."

"Can you forward this letter to him?"

"No. He did not leave his address; he never does."

"Come, that's nonsense," said the man, passing the footman and walking

into the hall. "I know he is in London, and that he lives here; and if you won't undertake to deliver this letter to him, I'll sit here and wait until he comes in."

All remonstrance on the part of the footman was quite useless; the man was told he was not in my house, that he had no right to remain there, all in vain; so one of the servants was eventually obliged to call a policeman, who, when he found the house was the private residence of a lady, who refused to give my address, ordered my obnoxious friend out. He went at once, not forgetting to express the opinion he had formed of my humble self, and which was anything but flattering.

Although it is now some years since this occurrence took place, the feelings I experienced on the occasion recur to me as vividly as though it had only happened yesterday. I was perfectly stunned, deprived almost of the power of collecting my ideas, and I scarcely think it is possible for any one, no matter what they may have done, to feel more ashamed than I did on that eventful day. No one spoke to me, but my relations were talking to each other; and I heard, as in a dream, such words or parts of sentences as the following: "Disgrace," "Subject to insult in one's own house," "Scandal in the neighborhood," "Servants," etc. I mechanically went into dinner, where I fancied I saw the butler, who was usually a very grave man, actually smiling at me. However, this must have been mere imagination on my part—he never could have presumed so to forget himself.

Although nothing was said on the subject, I knew I must leave my aunt's house at once, so I resolved to proceed to Paris the next day, and there to seek some sort of employment which should enable me to pay my debts, or, at any rate, maintain myself, until my relations should relent, and perhaps come to my aid; so I packed my portmanteau and prepared for my departure. I, however, foresaw great difficulties in my way, which my imagination increased; I began to think every one conspired to impede my escape; I was not certain whether some of my creditors, or their agents, might not be standing at the very door, or a little way off, to intercept me as soon as I appeared. In order, therefore, to attract

as little notice as possible, I sent a manservant with my luggage to the railway station, and directed him to take my ticket, register my luggage, and, in fact, make all arrangements, so that I might arrive just in time, and jump, as it were, from the cab into the train. About five minutes before the appointed time I drove up to the station, carefully muffled up in overcoats and divers wraps, with my travelling cap closely pulled down over my face, which gave people the idea I was suffering from a violent cold, and, casting a hurried glance around as I arrived, I hastily jumped out of the cab, and was rapidly entering the station, already congratulating myself on the good luck I had met with, when I suddenly heard some one running after me, and calling out something, which I was too agitated to hear; despair gave me courage, and I walked on even faster, hoping, I scarcely know what, but determined at any rate not to appear to notice that any one called me, or show that I had anything to fear, when I suddenly heard the voice of my pursuer, who by this time had caught me up, saying, "Please, sir, you have forgotten to pay your cab." I stopped, turned round, and saw a railway porter, closely followed by the cabman. I was so pleased with this discovery, that I immediately proceeded to pay the cabman double his fare, and gave the porter a shilling, doubtless for having caused me so much anxiety. I felt a man again, a free-born British subject, and moved forward with a feeling of great independence, assuming a graver and more becoming step—even venturing to look those I passed straight in the face. I reached the platform, received my ticket from my servant, and, having summoned the guard, I was just about to enter a first-class carriage, when a hand was laid upon my arm, and a man, who was evidently out of breath, and must have followed me, said, "Excuse me, sir," (oh! I thought, no doubt this time, and the idea made me feel so faint, I was obliged to lay my hand for support on the door of the carriage), "but I presume you are going to Paris, and if you would be so kind as to post this letter for me when you arrive, you will do me a great service. It is of importance to me it should be delivered in Paris in the course of the day,

and I was just too late for the post." My heart beat once more. I could breathe again. I was delighted; of course I would take the letter, I said; why nothing would give me greater pleasure than to oblige him. It was no trouble at all; should be sure to post it myself, etc. I believe if he had asked me, I should willingly have taken several boxes.

So I at last got into the carriage, an elderly gentleman, who was also rather late, getting in at the same time, and sitting down opposite to me. The signal was given, the train started, and in a few minutes we were some distance from the great city. "Well," I said to myself, "I am lucky; at any rate I have got my freedom; it won't be very pleasant working in Paris, but I shall be free, and have no stain on my character *there*—no exposure before the world." I drank some brandy from a travelling flask, as the emotions I had experienced made me feel very shaky, lighted a cigar, and feeling at peace with all my fellow-passengers, commenced inspecting their various countenances—in fact, I considered my escape to be accomplished, for, of course, even supposing they got an idea of the route I was taking, they would never send to Dover after me, so I smoked on, and thoroughly enjoyed my cigar, which, by the way, was a very good one.

I was not destined, however, to remain long undisturbed, for on looking at my fellow-passengers, I was suddenly startled by noticing that my opposite neighbor was looking at me very intently, and appeared to be watching me carefully. I turned my eyes away, and determined neither to think of or even notice the gentleman's scrutiny, which I thought, at any rate, very impolite, and again applied myself with renewed vigor to my cigar; but somehow it seemed to have lost all flavor, and I could not help glancing at my opposite neighbor. This time I thought I detected a sort of self-satisfied expression on his countenance, as though he had just discovered something in me of a pleasant nature. Presently, catching my eye, he addressed me.

"A cold evening."

"Yes, very."

"You are so well covered, I suppose you don't feel it much?"

"Well, it is perhaps better to be careful."

"It is; but I am surprised you should have arrived at this conclusion. Young men are generally so reckless, particularly in your profession."

"They are sometimes." ("What can he mean?" I thought. "He surely does not know me.")

"You are in the army, I believe?"

"No, I am not."

"True, I forgot. You have been."

"Yes, I have."

But imagine my consternation when, bending towards me in a confidential way, and speaking in a low voice, my companion said :

"I believe I am addressing Mr. —?"

I felt the blood rushing to my cheeks, and for one moment debated whether I should own my name or assume another; but reflecting, if he was following me, it would be quite useless trying to deceive him, I mustered all my courage, and, steadying my voice as well as I could, answered :

"Ye-s, you are."

"Ah, I thought I could not be mistaken. I seldom am; and," he added with a knowing smile, "to tell you the truth, I have seen one of those photographs you had taken at Meyer's, and they are really capital."

What wonderful means they employ, I thought. How could he find out I went there to be photographed? But he continued :

"Yes, I have been watching you some time, young man."

"Indeed," I said. ("You old brute," I thought, giving up all hope, and feeling a cold perspiration all over my neck and forehead.)

"Where are you going to?" he said.

"Well, I was going to Paris," I replied, wishing to make him understand I quite saw his meaning.

"Oh, I can't allow you to do that now we have met. I must insist on carrying you off for a short time. I'll see you are comfortably put up. You shall stay with me. I don't suppose your business is so very important as to prevent your accepting my invitation?"

Well, I thought, at any rate he is very polite, and even kind, for he evidently spares me, and does not expose me before the other passengers. As he

is chaffing, I'll try and answer him in the same spirit; so I replied I should be very glad to accept his kind invitation.

"That's right. I don't like people who make a fuss. They always come in the end."

"No doubt," I said to myself. "They have not much choice."

"Now, I dare say you'd like to know who I am, and what sort of a place you are going to stay at?"

"Oh, not at all, thank you. I am not curious. I'll make the best of it when I get there."

"Eh?—what?" said my friend, evidently rather astonished. "Make the best of it? Why, as for that, it is a place many a duke has been glad enough to live in before now."

"Really you surprise me," I said, at the same time sincerely pitying such unfortunate dukes.

"Well, you shall judge for yourself when we get home."

My new friend then, to my great astonishment and relief, told me his name was X., that he had been intimate with my father when they were both young men, and that he was at first much struck with the resemblance I bore to my father; he also informed me he had made a large fortune and bought a large estate within some miles of Dover, where he was now living, and that his greatest friend was my uncle, an old bachelor, who resided close to him; it was in his house he had seen my photograph, and from him he had heard of my leaving the army. I ought perhaps to tell you my uncle held no communication whatever with any of the family, having very peculiar ideas; he had quarrelled with most of them. But, although he never saw any of the members of his family, I found out afterward that he made it his special business to watch and follow, unknown to them, the careers of his nephews and nieces. I went to stay with Mr. X. (having given the letter I had promised to post in Paris to a gentleman, who kindly undertook to do it for me). He introduced me to my uncle, whom I had never seen before, and I made them both laugh very heartily by telling them how I had at first taken Mr. X. for a bailiff. My uncle lent me two hundred pounds to pay my debts, and also got me an

appointment of two hundred and fifty pounds a year, which, as my other relations again increased my allowance to one hundred pounds per annum, enabled me in a short time to repay him. I am well off now, and can only add that I had experienced so many disagreeables, had been so nearly forced to fly the country, and altogether felt so ashamed of myself, that the lesson proved a good one. I have never since exceeded my income, nor have I ever run into debt, recollecting, whenever I felt inclined to be a little extravagant, the events connected with my memorable journey to Dover.

CHARLES LORING ELLIOTT.

IN a recent number of the *ECLECTIC* we performed the pleasing task of sketching the career of our greatest living sculptor. This month we are called upon to pay a melancholy tribute to the memory of one of our greatest Painters, who, alive at that time, has since passed away. Death cuts off alike the famous and the unknown, the powerful and the poor, and each stroke of his sickle is followed by weepings and desolation, but the calamity assumes a national aspect when one of that galaxy of great Artists who have built up American Art is stricken in the very zenith of his fame and usefulness.

CHARLES LORING ELLIOTT, a portrait of whom embellishes this number, was born in Scipio, New York, in 1812. His early years were spent in Syracuse. Here he was placed by his father, who wished him to enter upon mercantile pursuits, in the store of a country merchant; but the youth discovered such distaste for the occupation that his father—an architect—took him into his own office.

His father desired to make a practical architect of him, but Elliott, soon tiring of the business, came to New York and became a pupil of Trumbull, and subsequently of Quidor.

His principal occupation for some time was copying prints in oil, with an occasional attempt at portrait-painting, in which he met with but indifferent success. After about a year's residence in New York, during which he acquired

a practical knowledge of the details of his art, he returned to the western part of the State, and devoted himself for ten years to the practice of his profession. At the end of that period he returned to this city, and established himself as a portrait-painter, in which he has since gained his great reputation. In 1846 he became a member of the National Academy of Design. For many years Mr. Elliott remained in New York, but the last three years of his life he made his home in Albany, where he died on the 25th of last August. No American artist has ever equalled Elliott as a painter of portraits. One of his most characteristic—that of Fletcher Harper—was sent to the Paris Exposition.

One of our writers in the *Galaxy* says of him:—

“ Elliott was in every respect an American—born in this country, educated in this country, and owing little to foreign culture. He was a pupil of Trumbull and Quidor, but derived his principal guidance in the art of portrait-painting from an admirable work by the celebrated Gilbert Stuart, which accidentally fell into his hands. Art very early took possession of him. When a mere boy, he locked himself in his bed-room to paint a grand picture of the ‘ Burning of Moscow,’ and at the age of fourteen, painted the portrait of a clergyman. This work, painted in black, white, and rose-pink, is still in possession of his family, and is said to give promise of the celebrity to which he afterward attained. He very early discovered that his true vocation in art was portraiture, and to this he devoted all the energy of his great genius. Slowly but constantly he advanced in knowledge of his art and in the development of his natural powers, until he reached the front rank among American Artists.

“ Elliott had more sympathy with strength than with delicacy, though many of his portraits are not wanting in refinement of feeling and execution; but he liked best to paint strongly marked faces, with a full, ruddy complexion, and his method of handling was bold and vigorous, though never even verging on coarseness. He worshipped strength, and hated weakness and conventionality. His pictures were a true

reflex of his own character—strong, robust, full of life, and not wanting in geniality, mixed with a certain grim humor, which sometimes found its way to the surface in an unexpected and startling manner. It is related that a clergyman, sitting to him for his portrait, ventured to lecture him severely on certain faults of character and life. The painter listened without appearing to be annoyed, and the clergyman began to think his remarks had made a good impression, when Elliott suddenly took him down by saying, in an off-hand, business way, "Turn your head a little to the right, and shut your mouth." The story is characteristic, if not true. Elliott's portraits are very numerous. His popularity was so great that his order-book was always full, and people have waited many months to obtain the favor of a sitting. Among his last

works were portraits of Dr. Chalmers, S. B. Chittenden, the eminent merchant, and John E. Williams, President of the Metropolitan Bank. A writer in the *Evening Post* says that, "from the middle of March to the eighth day of July, 1868, he had painted ten portraits (one a half-length), which incessant toil was, no doubt, the cause of his death. For these portraits he received the sum of seven thousand four hundred and fifty dollars. As soon as these were finished he returned to his home at Albany completely worn out, and never took up his pencil again." His death leaves a vacancy in American art which no portrait-painter living can fill.

Of all the fraternity of artists none was more beloved by his fellows than Elliott; and the work of none will be more missed than his from the walls of the Academy.

POETRY.

Chambers's Journal.

THE PLEIADES.

HAIL, ye celestial Seven,
Keeping bright guard
Before the gates of Heaven,
Gates of eternal azure, myriad-starred !

How radiant ye must be
Seen face to face,
Through yon infinity,
To shine so far with such resplendent grace ;

Whom knowledge cannot reach !
Like thoughts of power,
Beyond the grasp of speech,
Ye stamp with mystery night's silent hour.

The lark that meets the morn
On the sweet wind
Of his own music borne,
Like glorious triumph laughing through the mind,

E'en when his thirst he slakes
At noon's high springs,
And sweetlier singing shakes
Heaven's light in dewdrops from his lucid wings,

Cannot approach your sky,
Nor make it give
Echoes to the glad cry
Of harmonies that ever in him live.

No sun-aspiring wing
Hath e'er attained
To that most distant ring
Wherein ye Seven have for ever reigned.

Or is she lost, who graced
The seventh throne ?
And what great sin erased
The nightly splendor of her starry zone ?

As the old legends tell,
Doth she now wail
The love by which she fell,
In glen, or forest dropped with primrose pale ?

And do we hear the tones
Of her low plaint
Borne with the wind that moans
Through the dark bowers when twilight growtheth
faint ?

Ah, no ! though sweet it were
To think of this,
That shapes divine and fair
For human love should stoop from their high bliss.

No Faun or Naiad now
Keeps the green dell,
Or wanders near the brow
Of mountain, and by silver-dropping well.

That ancient tale now seems
An old-world song,
Romance's earliest dreams,
A thought of childhood worldlier thoughts among.

Far, silent Pleiades,
Your soul-shed light
Must chilling truth thus freeze,
And quench those eyes that gaze so sweet and
bright ?

When chariots of fire
From world to world
Wheel through all skies, nor tire
The sail of Man on heavenly seas unfurled,

When Earth shall cease to be
A lonely isle,
And her free progeny
Can pass by angels' globe and starry pile,

Young hearts may want no more
The sympathy
They thought your bright look wore,
And struck with awe alone go swiftly by;

Till those great ages live,
Ye shall be stars
That peace and healing give,
When saddened souls are sick with strife and human jars.

THE LONG STORY.

THE shadows of the little wood
Closed round us in the burning noon,
The lucent shadows of the leaves,
Yet tender with the green of June.

And there, while in a happy dream,
We wandered inward from the sun,
Winding and turning at our will,
The famous story was begun.

A story prodigal of love,
Of youth, and beauty born of youth ;
Of sorrow tempered by romance,
And trial glorified by truth.

Long, long ago it all had chanced,—
Or was it haply passing then ?
It might be true of any time
Since women were beloved of men.

I listened, yet I did not heed :
A rippling voice was all I heard,
That, softly cadenced, had for me
The music of a singing bird.

The tale went on, the voice I heard,
Yet all that I recall is this,—
That earnest face, those dreamy eyes,
That little mouth too sweet to kiss.

The tale went on, with many a pause,
With frequent outbursts of delight,
As breaks and openings of the wood
Its hidden beauties gave to sight.

A pheasant gleamed across our path,
A squirrel shot a sudden turn,
And now the cuckoo sang, and now
We waded coolest breadths of fern.

The little wood was long to cross ;
Its winding paths were hard to find ;
And hours had fled ere we emerged,
And left its pleasant gloom behind.

And then beside the rustic fence,
Whence spread the meadows many a mile,
We linger'd idly hand in hand,—
And p'raps the tale went on the while.

The evening shadows lengthened out ;
The heavy rooks winged home to nest ;
The little wood was fringed with light
Against the fiercely flaming west.

The sun set in a fleecy haze,
Through bars of crimson and of gold,
The sky grew cool, the stars came out,
And yet the story was not told !

WILLIAM SAWYER.

TO MY FRIEND.

You think me "good and true," and it is well
For you—for me ; and I will never tell
What I am else ; for better you be blind,
Than weakly to my faults and follies kind.
I love your charity ; would have my friend,
Concerning evil, simple to the end.
You see yourself reflected, see not me,
But something that, through striving, I may be.
You could but shun me, if my heart you knew ;
So stand without in sunlight, and look through
The darkened windows still, and never see
The inner chambers' soil and poverty ;
While I see you in sunlight clean and white,
And shade my eyes, and feel my night more night.
Friend, call me good ; paint the fair picture still ;
I shall grow like it ; with an earnest will
Will copy the fair draught in every line
From your dear hand, till I have made it mine.
It shall be mine, for we catch good at sight,
Who long for it, as we catch light from light.
Sound the high harmony of perfect law,
For music conquers man, and you shall draw
My wand'ring discords sweet, with silver call ;
My pulses set, with yours to rise and fall.

CUPID AT CARDS.

CUPID and my Campaspe play'd
At cards for kisses ; Cupid paid.
He stakes his quiver, bow, and arrows,
His mother's doves and team of sparrows ;
Loses them too ; then down he throws,
The coral of his lip, the rose
Growing on's cheek (but none knows how),
With these the crystal of his brow,
And then the dimple of his chin ;
All these did my Campaspe win.
At last he set her both his eyes ;
She won, and Cupid blind did rise.
O Love ! has she done this to thee ?
What shall, alas ! become of me ?

BEREAVED.

THE gay, glad year was yet in its prime,
When I lost the pearl I had only won
At the close of the previous summer-time—
The pearl of my life, and her little one.

The younger drooped when the elder died—
Followed her over the broad black River,
Leaving the gap in my soul more wide,
A gap that will gape therein for ever.

My loss has darkened my manhood's dawn,
Has shadowed all that was once so fair,
Till the sky of my life is quite o'erdrawn
With the web that Sorrow has woven there.

And oftentimes, when the restless ghost
Of that vanished twelvemonth haunts my brain,
I feel as if nipped with a sudden frost,
And racked with a something worse than pain.

Yet I bear it all with a bold, brave front,
And go on facing life as before,
With an inward anguish naught can blunt,
And a void in my heart for evermore.

THE SEA-GULL.

WHAT tempts thee to this inland lea,
Thou bird of wind and wave,
Deserting cliffs and lonely sea,
A random shot to brave ?

Say, dost thou bear on those white wings
Tidings of weal or woe ?
The black-bird builds, the throstle sings,
Young zephyrs gently blow.

Or wouldst thou with land-birds contend
For food our ploughs upturn ?
Thy habits will not lightly bend ;
Their ways thou well mayst spurn.

I've seen thee where the full surge laves
Iona's ancient shrine,
Float high above its sea-gnawn caves,
Like something half divine ;

Or on the Bass Rock's beetling brow,
In lines of living white,
Rest with thy kin—a pearly glow
To deck the robes of Night.

I've marked thee pass that reverend pile
With reverential stoop
Where pioun Hilda prayed, the while
Thy spotless pinions droop.

What art thou ? Sprung from drifted spray,
A bird of sea and air ?
Joyous when tides and tempests play,
When human hearts despair.

Good angel art thou—type of Hope,
White-pinioned, lofty, free—
To bid us with life's troubles cope
Till comes serenity.

A Presence art thou, pure, benign,
Roaming the boundless fields
Of sea and sky, in cloud or shine,
Bearing what each day yields.

Whate'er thou art, I gladly hail
In thee a heaven sent bird ;
Earth hath its dove, sea doth not fail
To make her teachings heard,

I could not harm thy pure pale wing,
Flecking yon deep blue sky—
Fear not, as through the heart of Spring
Thou slowly sailest by.

A welcome sign art thou to me
Of thoughts no verse may tell :
Thou fiest tow'rs th' Eternal Sea,
Fadest—art lost—farewell !

NOTES ON BOOKS.

Eminent Women of the Age. Hartford: S. M. Betts & Co. Woman is at length rising to the surface. After ages of practical if not confessed inferiority, she is making for her sex a history, and widening the possibilities of the future for the human race. The days have passed away when the only reputation to be achieved by a woman was that of an Aspasia or a Cleopatra ; and having proved her fitness, the question of admitting "the other sex of man" to many a field from which she has hitherto been excluded, is the great social problem of the present time. The signs of the time are all round, the handwriting is on the wall (and on the fences), and he who runs may read.

Whatever may be her "sphere" in the future—whatever may be the functions which will be assigned to the coming woman, when the dust of contest has subsided—it is certain that the old order of things has passed into "Time's great storehouse of oblivion."

The forum, the press, and even the pulpit, are agitated by the throes of a central convulsion which betokens an era of transition. Never was woman and her relations to the constitution and course of society so prominently before the public; even the "Superfine Review" has wheeled into line, and, in its peculiarly malicious way, is hammering the subject into the brains of the fashionable world. The gates of colleges and scientific associations are beginning to creak in reluctant opening, and everything is being prepared for the application of the crucial test—success.

There can be little doubt that this agitation is the result less of the enlightened spirit of the age than of what woman has actually accomplished. We do not refer to what has been done by those who are commonly called "agitators"—they are but a branch of the movement, and a comparatively insignificant branch—but by those who, overcoming all obstacles, have risen to the front rank in Literature, in Science, in the Arts, and even in the more exclusive Professions. This has been accomplished principally during the present generation, and by many who are still alive. That they deserve a record seems a self-evident truth. It has been the misfortune of eminent women hitherto, that their fame was principally awarded by posterity. In their lives they were little known, and less appreciated. Our contemporaries are more fortunate.

In the volume before us, *Eminent Women of the Age* are treated by eminent writers of the age in a style and spirit which should alone insure them immortality. Representative women in every field—Literature, Science, Art, and Polemics—have been selected with singular judiciousness,

and their lives and deeds presented to us in sketches just long enough to be just without being tedious. The plan of the work is excellent. Seldom more than twenty pages are devoted to one subject, but these are written by the most able and experienced of our authors.

Biography is in general altogether too diffuse. There are but a few salient points in the life of any person which the public have either the desire or the right to know, and a clearer conception can be conveyed in a well-written sketch of thirty pages than in a lumbering volume of three hundred. It is because this is usually ignored, that biography ranks so low in the field of literature. The number of writers in *Eminent Women* is almost as great as the number of those written about, and each subject has been judiciously assigned to the one who would feel most sympathy in the treatment. It is altogether the most refreshing work of the kind that we have yet seen upon our table.

Where James Parton, E. Y. Hincks, Horace Greeley, Mrs. Stanton, and others equally well known, furnish the essays, all are, of course, excellent, and comparison may be invidious, but we cannot forbear to call particular attention to those of Colonel T. W. Higginson. His sketch of Margaret Fuller Ossoli is the best in the book, whether for felicity of style, subtlety of criticism, or art in construction. Every page is a treat to those who can appreciate elevated culture and refined taste. Some of the women included could very well have been left out, and no list could be complete without George Eliot, Charlotte Brontë, and others, but the publisher has evidently chosen from his own country as far as possible.

We believe that *Eminent Women of the Age* will become one of our classics, and we do not hesitate to say that it should be, not in the library or on the table, but in the hands of every family in the country.

What Answer? Boston: Ticknor & Fields. We cannot think that the book before us will add anything to Miss Dickinson's reputation.

Taking it up with a predetermined admiration, with the "foregone conclusion" that any of Miss Dickinson's intellectual offspring must demand the homage which we have been proud to render to her genius, we lay it down with a feeling of blank disappointment.

As a novel it lacks breadth and depth, and that subtle versatility which can grasp and delineate the "many parts" which each man plays in the drama of life.

Looking back over it after perusal, and eliminating the central idea from the rather loosely-joined episodes, it presents a fortuitous concourse of heated romance, improbable characters, and passionate eloquence.

Her ideas of love are as wild and unhealthy as those of the ordinary sensational novelist, and as little likely to obtain the allegiance of any but the very young or the very romantic.

After subjecting the hero and heroine to the delicious ordeal of "love at first sight," she says: "Some souls were created for each other in the eternities; are predestined for each other by the very necessities of their nature. When they meet . . . Master . . . Mistress . . . recognize . . . etc."

Very fine, but rather different from the doctrine of Dr. Johnson, who held that "marriages would be equally happy if arranged by the Lord Chancellor," and we may be permitted to regret that the "necessities of their nature" are so seldom efficient enough to bring those souls together.

The characters are in general ideally noble (though rather monotonous), and her soldiers are about as true a type of their class as Midshipman Easy of his.

We might also suggest that the reason of bigoted men is not in general so easily reached by outside facts, and that briskness in dialogue does not consist in lopping off one end of the sentence, repudiating conjunctions, and abbreviating every word that is susceptible of abbreviation.

The merit of the book, as of the lectures of the author, lies in the fervid earnestness and impassioned eloquence with which the appeals are made, but the animus of the work is precisely what we disapprove of.

While treasuring the lessons of the War, the passions and animosities which it aroused should be allowed to subside; but Miss Dickinson, in view of the coming election, has waded once more through the blood of those reeking years, and stirred up the smouldering embers of sectional hatred.

It is idle to suppose that miscegenation can be smuggled upon the people by representing it in *couleur de rose*, surrounded with all the pomp and splendor of unlimited wealth, princely opulence, and noble martyrdom. The plea of the Quadroon has been made often enough to class it among "Twice-told Tales."

In the marriage of Surrey to Miss Ercildoune, he is represented as doing a noble action. But has a man the right to bring children into the world, who will stand in the position of social outlaws, simply to gratify a mad passion?

It was a dramatic and pathetic stroke to cut off these married lovers in the morning of life and of happiness, but it was also a diplomatic one.

They were youthful then and defiant, but we know that life under such circumstances must eventually be filled to the brim with bitterness. No man has a right to throw down the gauntlet to society when the fate of others, and those unborn, are involved with his, for in the end the individual will be crushed. George Eliot delineates this with terrible truth in her *Spanish Gypsy*—

"Such revenge
Is wrought by the long travail of mankind
On him who seorns it; and would shape his life
Without obedience."

We entertain a profound admiration for the genius and talent of Miss Dickinson, but we cannot think that the next generation will point to "What Answer?" as an indication of them. ¶

Plain Thoughts on the Art of Living. Boston: Ticknor & Fields. This book is a series of lectures delivered to young men and women, by the Rev. Washington Gladden, and subsequently revised for publication. Though nothing particularly new or original is propounded, Mr. Gladden has placed the Art of Life on a much broader and sounder basis than almost any other laborer in the same field. Giving a marked prominence to the moral aspects of the subject, and crystallizing the whole around religion, he offers valuable and practical

suggestions on mental and physical culture, and severely analyzes and exposes many of our social shams.

We know of no author who so temperately and yet so decisively strips off the gloss and glamour which veils what are called "fashionable vices," and exposes their hideous deformity.

The contemptuous repugnance toward them with which he inspires the reader is remarkable when we consider the absence of all rhetorical flourishes or dramatic appeals to the emotions. Practical common-sense argument, and perfect self-control, are the chief characteristics of his style.

The mistake which is made by the majority of writers who assume to themselves the office of social censor is that, ignoring reason, they plunge right out into the arena, sword in hand, and proceed to hack and hew right and left. Fervid and impassioned eloquence, biting sarcasm, and burning indignation are the only weapons in their armory, and the thoughts which they awaken are of course as transient as the emotions which they excite. They lose their temper, and their readers naturally do the same, thus rendering impossible that equal co-operation of thought and judgment so essential to the formation of any lasting conviction.

Our author evidently sees and avoids this, and the "plain" conversational ease of his treatment is scarcely less admirable than the facts he presents.

Every young person ought to read this book, but will they? The misfortune of a work of this kind is, that it never reaches the class it is intended to reach.

Young men and women are the very last ones to purchase them, and, even if they see them, pay as little attention to sermonizings in books as to sermons in the pulpit. The book will be read by reviewers, literary omnivora, ministers, and personal friends of the author, with an occasional hit in the right place, but we are sometimes inclined to think that the class particularly addressed will never be reached by "Plain Thoughts" on any subject.

Where all the themes are treated so ably and perspicuously, the mention of any particular ones may seem superfluous, but we recall with peculiar satisfaction the chapters on Mental and Physical Culture, and Marriage.

We venture to point out what we consider an error in the observations on political economy which initiates the essay on Stealing as a Fine Art. John Stuart Mill takes decided exception to the doctrine that political economy is a science of "Catalactics" or exchanges, and there is little doubt that his Principles demonstrate the validity of his objection.

Little Women. Boston: Roberts Brothers. Within the past twenty years, the proportions to which children's literature has attained is well calculated to excite astonishment. There is no end to the making of books, tales, magazines, and papers for the young people, and the immense circulation which some of them have reached shows that they are recognized as an important educational influence.

The majority of them, it is true, consist of piling, do-me-good, copy-book morality, calculated

to turn the stomach of any sensible child; but occasionally something really valuable and meritorious is produced. "Little Women" is one of these. The tone is healthy and wholesome, the scenes are natural, and the incidents varied and amusing.

Miss Alcott has evidently studied children, and is too appreciative of the truly beautiful in childhood to attempt to preach them into stiff-backed, spiritless propriety.

The Little Women of the author are of course decidedly more lovable and intelligent than little women ever are, and the humor is often strained and feeble; but, as Mr. Snagsby says, "not to put too fine a point upon it," the book is, on the whole, an excellent one of its class.

Grace Owen's Engagement. Boston: Loring. This is a very excellent short story, reprinted from *Blackwood's Magazine*.

In passing through the latter, it received many commendatory notices from the English press, and has been republished in one or two of our own periodicals.

Its merits are certainly considerable, and of a peculiar kind. It is an artist's story, told by an artist, in an artist-like manner.

The refined atmosphere which pervades the book—an atmosphere of genius and of music—and the realistic but elevated tone are very refreshing, when compared with the artificial transcendentalisms which characterize the usual attempts to portray a field of experience at once exceptional and lofty. As a whole, it is one of the few short stories which, at the conclusion, we wish were more elaborate; and we regret that, by a too rigid system of condensation, the author has reduced to a pamphlet characters, incidents, and material amply sufficient for a book. The more so, as he has shown himself capable of giving them such masterly treatment.

Modern Women. New York: J. S. Redfield. This volume contains the sharp, sour, and cynical essays on Woman, which recently attracted such attention in the columns of the *London Saturday Review*.

Many of them were copied in various American periodicals, and have awakened equal interest here.

The famous "middles" of *The Saturday Review* have always been marked for the asperity of their treatment of social foibles; but when the Girl of the Period made its appearance, it was evident that a new power had entered the field armed *cap-a-pie* for conflict.

Week after week the crusade continued, until the versatility of the writer began to be commented upon equally with his (or her) ability. If polished, withering, and biting sarcasm could be of any avail in arresting the surging tide of dissipation upon which fashionable society has launched, the critic of the "Saturday Reviler" is certainly entitled to expect success; but satire has always, unfortunately, been more effectual in tickling the intellectual palate than in lopping off the excrescences of the body social. If we are to accept the dicta of this Jeremiah, *Modern Women* must be "deceitful above all things, and desperately wicked;" but the mistake which he makes is in supposing that he has presented the type, when in

reality he has but presented a type. Diogenes the Cynic failed to find "a man" more from his own incapacity to appreciate true manhood than because "a man" did not exist. Satire is blind as well as love.

Still, the air of temperate moderation, and the absence of vulgar invective, is very marked in these essays, and is one of the principal elements of their success.

They should be read by all, and pondered upon; for however loath we may be to believe that they justly delineate modern women, they certainly point out the diagnoses of a disease which is but too rapidly spreading.

Law of Human Increase. New York: Moorhead, Simpson & Bond. Few questions, since the birth of Political Economy, have been the theme of so much discussion and the basis of so much speculation as the law of Population. From the first great work by Malthus, in 1798, down to the pamphlet before us, theories without number have been propounded, and disputation has never slackened. The leading principle of Malthus is, "that population, when unchecked, increases in a geometrical ratio, while subsistence increases only in an arithmetical ratio."

Many able men have not only denied this axiom, but have taken ground almost exactly the reverse. Still, J. S. Mill and other eminent Sociologists are agreed that if Malthus did not discover the truth, he pointed the direction in which truth lay, and their deductions are certainly not to be ignored.

Dr. Allen, the author of the present treatise, bases Population on Physiology and Psychology, and he undoubtedly proves that these have usually been too much ignored. His conclusions must be recognized as one of the elementary quantities of the great equation; but we cannot concede that they form a basis by themselves for any legitimate speculations. They form but one of the factors, and that not the principal one. The "physical capacity for increase," which is, after all, the theorem of the essay, must have a very powerful influence upon population, but no one will maintain that population is ever in proportion to that physical capacity. This argues the existence of some other laws, sufficiently powerful to suspend the operation of a natural law, and which modify and subordinate it. Population is, probably, the most complex of all social problems; causes are lost in effects, and vice versa, and if Mr. Allen has failed in giving us a satisfactory solution of the problem, he may claim the merit of widening the field of discussion, and introducing an element which, as we have said, has been too much ignored.

Apart from its speculative value, every young man, and particularly every young woman, should read this essay. The important facts and statistics which are collected deserve attentive perusal and solemn meditation, and might do something to check the wild dissipation and fatal practices which are whirling successive generations with ever-increasing rapidity to a premature tomb.

But this hope is based on the supposition that the facts would impel them to use their reason, whereas the majority of our social victims have no knowledge whatever of their brains, except as the seat of sensation.

"Reason," as Mlle. de Menlan says, "is for the

reasonable," and unfortunately the vast majority are constitutionally superior to reason.

Hand-Book of Politics for 1868. Washington, D. C.: Philp & Solomons. There is probably no branch of human knowledge which presents itself to us in so many different garbs as does History. The cold and polished productions of Gibbon or Hume, the brilliant rhetoric of Macaulay or Alison, and the ponderous sentences and volumes of Bancroft, are all inspired by the same Muse, while the dry didacticisms of simple Chronology are recently rising to marked eminence in the same field.

Some philosopher has predicted that the time will soon come when the only written history will be the public Press. We may venture to hope that the Press will have improved on its present models, before it absorbs into itself so important a function. After all, we doubt if any History can be truthful in the impressions which it conveys, as well as in the facts which it communicates, except such a compilation of data as are to be found in this Hand-Book. One important recommendation is, that it awakens thought in the reader instead of admiration, and this is Montesquieu's test of merit.

The scope of the work before us is scarcely indicated in the title. It is a reprint of the "Political Manual" for 1866, 1867, and 1868, and all the important public events of these years, pregnant with the fate of our institutions, are presented, principally in official documents.

The Manual opens with the Constitution of the United States, and goes through the President's Proclamations, Messages, Speeches, Vetoos, &c., through the legislation of Congress on the momentous questions of the last three years, through judicial opinions, and the progress of Reconstruction in the South, up to the Platforms on which the two parties are fighting out the present campaign.

Many valuable miscellaneous data, such as the celebrated Virginia and Kentucky Resolutions of 1798, and the National Platforms of 1852, 1856, 1860, and 1864, are also introduced.

The work is a valuable one, as the documents are official, and there are no comments to mislead.

Knowing the sympathies of the author, we apprehended partisanship in the compilation and arrangement; but Mr. McPherson is either too well convinced of the importance of his work to destroy its permanent value, or believes that the case of his party can stand on its own merits. We believe that nothing of importance has been suppressed.

When years have passed, and these last three are looked back upon as the great crisis in our national life, the value of the hand-book will probably be better appreciated than at present. What is experimental now will be axiomatic then, and the dust of conflict having cleared away, the people will be prepared to read the record and count the slain.

Half-Dollar Edition of Tennyson's Poems. Boston: Ticknor & Fields. Everything which brings standard literature within the reach of the masses of the people must be considered an important element in their education.

Whatever merit may accrue to this class of en-

terprise is certainly due in an eminent degree to the firm of Ticknor & Fields.

They have published many cheap books, but never to our knowledge any of equivocal reputation—all standard works. They are now issuing a half-dollar edition of the poets, of which this is one.

It contains Tennyson's poems complete, is neat and legible, and is well worth the money to any who feel themselves unable to buy the more expensive editions.

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SCIENCE.

The Great Solar Eclipse.—At Bombay the eclipse was nearly total, as predicted, but the weather was very unfavorable for observation, and rain fell at the time of greatest obscuration. We are glad to be able to announce, however, that the eclipse has been successfully observed by two expeditions at least, though little is known as yet respecting the results which have been arrived at by the observers. Telegrams have been received almost simultaneously from Major Tennant, who commanded the expedition sent out by the Astronomical Society, and from Dr. Jausseen, who commanded the French expedition. Major Tennant states that light fleecy clouds covered the sky, but that the eclipse has been, in the main, successfully observed. His party had undertaken the duty of photographing the eclipse. The Government of India had obtained from England a Newtonian reflector, specially constructed for the occasion. M. Janssen states, in a telegram forwarded to Paris, and thence to the Royal Astronomical Society, that the eclipse has been successfully observed. The spectrum of the red protuberances, which are seen around the black disk of the moon during totality, and which have long since been proved to belong to the sun, has been found to present a very remarkable and unexpected appearance. What this appearance is he does not tell us; but one conclusion drawn from the nature of the spectrum is that the protuberances themselves are gaseous. There are few observations more simple and conclusive than those by which the general character of a self-luminous object is determined by spectroscopic analysis. The rainbow-colored streak of light which indicates that the source of light is a luminous solid or liquid; the colored streak crossed by dark lines, which indicates that, before reaching us, the light from such a source has passed through absorptive vapors; and the spectrum consisting of bright lines only, which indicates the source of light is a luminous gas;—all these spectra are so readily distinguishable *inter se*, that it is impossible for the veriest beginner to mistake one for another. Thus it may be looked upon as absolutely certain that the nature of the colored prominences has now been definitely settled. Those enormous masses of luminous matter, some of which exceed the earth many hundreds of times in volume, are now known to be great gas-heaps. It had been supposed that they were solar clouds, formed by the condensation of the metallic vapors which exist within the solar atmosphere into liquid globules, in a manner precisely corresponding to the formation of aqueous

clouds in our own atmosphere. This view will now, in all probability, have to be definitely abandoned. Yet that the prominences are formed by some sort of condensation taking place within the solar atmosphere seems almost indisputable; so that the evidence we now have would seem to show that, as a modern astronomer has suggested, the fierce heat which exists in the sun's immediate neighborhood is sufficient to "melt solid matter, turn liquids into vapors, even vapors into some still more subtle form."—*Daily News*.

The Wonders of Modern Chemistry.—About 100 tons of guano from Sombrera, in the West Indies, was reshipped at Southampton, last week, for Birmingham, to assist in the manufacture of lucifer matches. Mixed with sulphuric acid, this guano is converted into an excellent manure. If, instead of being made into manure, the phosphoric acid is extracted from it, the extract is made to form the igniting property of lucifer matches. Thus the same material that raises the food of man and beast lights the cigar. It builds up the hay-rick and wheat-stack, and helps to form the instrument with which the incendiary burns them down. Wealthy farmers, and street Arabs, who sell halfpenny boxes of lucifer matches, are often dependent on the excretions of sea-birds who frequent a desert rock in the West Indies.

Expeditions to the North Pole.—As we ventured to anticipate (says the *Daily News*), the commander of the *Germania* has had to give up the plan of making the eastern coast of Greenland in a high latitude. Availing himself, in all probability, of information brought him by captains engaged in the Greenland whale fishery, Captain Koldewey would seem to have made his way in a north-easterly direction through the masses of ice which were collecting themselves in a compact mass along the eastern shores of Greenland. We now hear of him in latitude $80\frac{1}{2}$ degrees north, and in longitude 5 degrees east. He is now to the northwest of Spitzbergen, and in the exact course of the Gulf Stream. We cannot but think that he has greatly improved his prospects of reaching the North Pole this year. Others, indeed, have been as far north as he has, and in the same favorable track. But the *Germania* is a steamship, and in Arctic navigation a steamship has immense advantages over a sailing vessel. If there is any truth in the opinion which most of the ablest modern Arctic seamen entertain, that a widely extended sea surrounds the North Pole in summer, then Captain Koldewey has only to penetrate a comparatively narrow belt of ice fields to find himself on the waters of the Polynnia, which is now among the mysteries of science. In traveling northwards he will not be exposing his crew to a greater intensity of cold than that from which they have suffered in lower latitudes. It is unknown where the true northern poles of cold lie in summer, but it seems probable that there are three—one lying in the northern parts of Greenland, another near Nova Zembla, and the third near Behring's Straits. The *Germania*, when last heard of, was almost exactly midway between the two former points, and it is therefore probable that every mile of her northward course will bring her into a warmer climate. Nor is it likely that, in case she should have to winter

near the pole, her crew would suffer from nearly so great an intensity of cold as that to which the crews of ships which have wintered near Melville Island have been exposed. There are known to be two northern poles of cold, and of these neither lies near the north pole of the earth.

The Swedish expedition has been less successful hitherto than the German. Whereas the latter reached Bear Island on July 5, the former did not arrive there until July 22, and remained until July 25. Three weeks lost from the short Arctic summer will seriously affect the prospects of the Swedish expedition. It is not absolutely impossible, however, that both expeditions should prove successful.

The Origin of Tea.—Darma, a very religious prince, son of Kasinwo, an Indian king, and the twenty-eighth descendant of Tiaka, negro monarch (1023 B. C.), landed in China in the year A. D. 150. Probably a Brahmin or a Buddhist of great austerity, he employed all his care to diffuse a sense of religion, and for this purpose denied himself rest, sleep, and relaxation. He lived in the open air, and devoted himself day and night to prayer and contemplation of the nature and beneficence of God, aiming at eventual absorption into the Divine essence, when purified by long prayer, fast, and vigil. Flesh is flesh, however. After several years, worn out by want of food and sleep, Darma, the great and good, involuntarily closed his eyes, and after that slept soundly, reckless of anything but rest. Before dawn he awoke, full of sorrow and despair at having thus broken his vow, snatched up a knife and cut off both his offending eyelids. When it grew light he discovered that two beautiful shrubs had grown from them, and eating some of the leaves, he was presently filled with new joy, courage, and strength to pursue his holy meditations. The new plant was the tea plant, and Darma recommended the use of it to his disciples and followers. Kempfer gives a portrait of this Chinese and Japanese saint, at whose feet there is always a reed to indicate that he had traversed seas and rivers, and had come from afar. The legend seems to prove that from the earliest times tea was known among students and austere people as a disperser of drowsiness. Its first use was no doubt accidental, as was that of coffee, the virtues of which, the Arab legend says, were discovered by some goats, who had browsed on the leaves of the coffee plant, and became unusually lively after their meal. It is a singular fact, too, that Jesuit writers who visited China in the reign of James I, expressly state that they used the herb tea common among the Chinese, and found that it kept their eyes open, and lessened the fatigue of writing sermons and hearing absolutions that lasted late into the night. No doubt the figure of Darma and his reed could be found on old china.—*All the Year Round.*

How the Monkeys became Men.—Some of the savages in south-eastern Africa believe that the souls of their ancestors return to earth clad in the forms of monkeys, which on that account are petted and reverenced. The notion that men are in some way related to monkeys is not to be wondered at in untaught nations, and hence we are not surprised to find a peculiar view of it among the natives of western India. In one of the Gov-

ernment reports of the district of Kolhapoor, we find the following curious example of what we refer to. The extract is a translated essay on the origin of the Europeans and some other nations, and was produced during his examination by one of the Kolhapoor aspirants for a Government situation: "Pleased with the conduct of his followers, the monkeys, while at war with Rawun, King of Lunka (Ceylon), Ramas wished to give them a banquet; but, as the monkeys possessed no taste to appreciate the feast, he created two lakes, one having power to transform the monkeys on bathing into human beings, and the other to restore them to their original shapes. Eighteen leaders or chiefs of the monkeys, however, after the change, objected to their original forms, as they preferred remaining human beings; and to elude Ramas' resentment, they had recourse to Seeta, his wife, who left them afloat on the great sea on eighteen *drones* (leaves formed into round platters), and gave them her blessing, that they should be supreme lords of whatever coast they might reach. The descendants of twelve of these transformed monkeys are now enjoying great power in the lands they respectively reached, and the *drones* were formed by them into hats, which they now wear on their heads. Their names are—

1. The Seikhs.	7. The Firungee.
2. The Masoosée.	8. The English.
3. The Purukal.	9. The Portakésee.
4. The French.	10. The Moguls.
5. The Alle.	11. The Chinese, and
6. The Dutch.	12. The Mah Chinese."

We commend this Hindoo legend to the notice of our modern advocates of "the development theory."

The Bone Caves of Brazil and their History.—The *Popular Science Review of Scandinavia* contains a most interesting account of the Brazilian bone caves, by Professor Reinhart. The Professor's conclusions have been thus formulated by a contemporary: "1. During the post-*plioce* epoch, Brazil was inhabited by a very rich mammalian fauna, of which the recent one might almost be said to be a mere fraction or a crippled remnant, as many of its genera, even families and sub-orders, have vanished, and very few been added in more recent times. 2. During the whole post-*plioce* epoch, the Brazilian mammalian fauna had the same peculiar character which now distinguishes the South American fauna, compared with that of the Old World; the extinct genera belonging to groups and families that to this very day are peculiarly characteristic of South America. Only two of its genera, the one extinct (mastodon), the other still living (the horse), belong to families that in our epoch are limited to the Eastern hemisphere. 3. All the mammalian orders were not in the same degree richer in genera in former times than now. The *Bruta*, *Ungulata*, *Proboscidea*, and, lastly, the *Fera*, have relatively suffered the greatest losses. Some orders, for instance the *Cheiropo* and *Simiae*, number perhaps even more genera now than formerly. 4. The post-*plioce* mammalian fauna of South America differed much more from the modern one, and was especially more rich in peculiar genera, now extinct, than the corresponding fauna of the Old World. 5. The scantiness of great mammalia—one might say the dwarf-like stamp impressed upon the South American mammalian fauna of

our days, when compared with that of the Eastern hemisphere, was much less observable, or rather did not exist in the prehistoric fauna. The post-pliocene mastodons, *macrauchenia*, and toxodonts of Brazil, its many gigantic armadillos and sloths, could well rival the elephants, rhinoceros, and hippopotami, which during the same period roamed over the soil of Europe."

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VARIETIES.

Co-operative Life Insurance.—Since the beneficial results of life insurance, as a preventive of suffering and of crime, have been recognized in every country capable of comprehending complex monetary transactions, many plans have been tried and various improvements made, all tending more or less to the advantage of the insured.

With some companies, there is simply the payment of a specified annual sum, for which a specified amount is to be paid to the heirs of the insured, after his death. With others, the insured become stockholders, and partake in the profits of the corporation.

Of course the primary consideration in taking out a life-policy is its cost. This, especially to a poor man, is of paramount importance. If by one plan of insurance he can get \$5,000, in case of death, for \$80 per annum, whereas, by another plan it will cost him \$100, the advantages of the former are unquestionable.

The Manhattan Co-operative Relief Association, just established in this city, is based on a plan which seems simpler than any hitherto tried, and yet comprises the principles which form the groundwork of all insurance. Co-operation, which has performed such wonders in the field of industry, is brought to bear here, and each member of each class is insured by every other member of the same class, the Association being only the bureau through which this is done. Men living in different parts of the country, and utterly unknown to each other, are thus made to become, as it were, integral parts of one body, the whole organism laboring for the good of each member.

The members of the association are divided out into separate and independent classes, according to age, each class being limited to five thousand. Now the science of statistics enables us to compute with the utmost accuracy the rate of mortality in a given number. In every one thousand persons five will die each year, or twenty-five in five thousand.

Placing the average high, we may say thirty in five thousand will die each year, and the expense of insurance will thus be \$6 initiation fee, \$1.10 on the death of each member, or \$33, which makes \$39 the first year, and \$33 each succeeding year, for a policy of \$5,000. This certainly brings life insurance within the reach of the poorest.

The officers and trustees of this association are gentlemen of honor and integrity. The president is personally known to us, and all are men of financial standing in the community. We would invite the attention of our readers to the details of the plan, as exhibited on the outside page of cover.

National Libraries in Spain.—The *Annual of Public Instruction*, published at Madrid, contains some interesting details of the national libraries

in Spain. The number of volumes contained in those establishments is 1,166,595, spread over the capital and the provinces. The library of Madrid alone contains 300,000, that of the Central University 300,000, of Barcelona 136,000, and of Salamanca 55,000. There are similar institutions not only on the continent, but in the Balearic and Canary Isles. That of Palma and Majorca contains 35,000 volumes, and that of Mahon nearly 11,000. As to the archives, the entire history of the country, of its customs, and political life may be said to be represented in them. There are 70,278 packets of papers in the old palace of Simancas, 35,000 at Alcala de Henares, 34,000 in the archives of the Crown of Aragon, and 97,000 in the national historical record office. At Valencia, Corunna, and Majorca there exists an immense number of papers, manuscript volumes, account books, and parchments, preserved with care, and which show the interest Spain has never ceased to take in written monuments and serious studies. The same publication contains also some indications concerning the general state of instruction in the Peninsula and the adjacent islands. There are 27,000 infant schools, attended, according to the last census, by 1,500,000 children; 77 institutions for training teachers, and 5 for the deaf and dumb or blind. With respect to secondary instruction there are two establishments of the first class, 16 of the second, 32 of the third, and 14 local institutions. There are 10 universities for teaching theology, law, medicine, pharmacy, the sciences, literature, and philosophy. In addition to these there are several special schools, of which 11 are for the fine arts, 1 for music and declamation, 2 for manufactures, 1 for diplomacy, 5 for commerce, and 17 for navigation; also 29 boarding-schools, and 118 private establishments. The Budget of Public Instruction amounts to 22,428,090 reals, but the sums raised for the same object in the provinces and the communes increase the total amount expended on educational purposes to 110,000,000 of reals.

A Curious Coincidence.—The *Moniteur* informs us that on the occasion of the funeral of the late Queen of Madagascar orders were issued for a national mourning, which was to last three months. During that period ladies were to wear no garment that covered the bosom or fell below the knee. The "effect," says the *Moniteur*, was "peculiar." We are surprised at the remark, considering that in Paris, and certainly in London, a similar costume is now perfectly common. The only difference between Madagascar and either metropolis, that we can see, is that in the former women go about half-dressed in obedience to superior orders for a limited period and in moments of grief; whereas amongst us they indulge in the "peculiar effect" in hours of supposed gayety, and threaten to continue to do so for an indefinite time. We suppose it is only another illustration of extremes meeting. Perhaps when the fashionable females of England are compelled by some calamity or other to go into mourning, they will once more dress themselves, at least for a time.

Luther Monument at Worms.—The monument was inaugurated by the King of Prussia, there being also present the King of Wurtemberg, the Prince Royal of Prussia, the Grand Dukes of

Saxe-Weimar and Hesse, Prince William of Baden, and an immense concourse of spectators. When the monument was uncovered, salvoes of artillery were discharged in honor of the event. The following telegram was sent to the King of Prussia by Queen Victoria: "Pray express to the Committee for the erection of the Luther memorial my most hearty congratulations upon the successful completion of their task. Protestant England cordially sympathizes with an occasion which unites the Protestant princes and peoples of Germany."

We are given a very good description of Mr. Longfellow's house, his children, and himself. Of the poet's personal appearance the writer says:—

"A man above the middle height, and although not stout, solid and well-proportioned; head now a little bent, a noble, poetic head, with long, waving hair, nearly white, reaching almost to the shoulder; forehead high and square, the hair brushed well back; blue, brilliant, genial eyes—true eyes of a poet—which observe everything; a long nose, a long moustache, which creeps down and joins a flowing white beard that rests upon the breast; the hair and beard not too sprucely arranged, carelessly and naturally disposed; the whole countenance naturally handsome, active, *wide awake*, beaming with unusual intelligence."

Explanation Extraordinary.—As some anxiety seems to exist in the minds of certain French politicians as to the real objects of Her Majesty's trip to Lucerne, we are happy to inform them that they are—

1. The establishment of an alliance, offensive and defensive, between England, Spain, Italy, Russia, the Pope, Austria, Sweden, and Montenegro, for the total absorption of France by the various members of this new Grand Alliance.

2. The propagation of Orleanist documents throughout France, by means of white mice trained for that purpose.

3. The total removal of the Alps, and rearrangement of the same as an ice barrier around the coasts of England, provided only that the Wenharn Lake Ice Company can be induced to consent to the measure.

4. The creation of large vineyards all round the Swiss Lakes, to the infinite prejudice of the French champagne trade.

The Importance of Sleep.—There is no fact more clearly established in the physiology of man than this, that the brain expends its energies and itself during the hours of wakefulness, and that these are recuperated during sleep; if the recuperation does not equal the expenditure, the brain withers—this is insanity. Thus it is that, in early English history, persons who were condemned to death by being prevented from sleeping, always died raving maniacs; thus it is, also, that those who are starved to death become insane; the brain is not nourished, and they cannot sleep. The practical inferences are these:—1. Those who think most, who do most brain-work, require most sleep. 2. That time saved from necessary sleep is infallibly destructive to mind, body, and estate. 3. Give yourself, your children, your servants—give all that are under you the fullest amount of sleep they will take, by compelling them to go to bed at some regular early hour, and to rise in the

morning the moment they awake; and, within a fortnight, nature, with almost the regularity of the rising sun, will unloose the bonds of sleep the moment enough repose has been secured for the wants of the system. This is the only safe and sufficient rule; and, as to the question how much sleep any one requires, each must be a rule for himself; great Nature will never fail to write it out to the observer under the regulations just given.—*Dr. Spicer.*

A Russian Peter the Hermit.—The population in Russia are at this moment being greatly excited by the preaching of an old Muscovite peasant, named Alexis Alexandrovitch, who, after a seclusion of several years, appeared in the district of Samara, declaring himself a prophet. He is now going from place to place announcing the approaching destruction of the Crescent, and the substitution of the Greek Cross for it on the dome of St. Sophia at Constantinople. The Russian Government allows every liberty of action and language to this popular agitator, who besides does not attack the laws or the administration in any way; his doctrines are those of the old Russian party.

The Great Female Excitement.—One of the sensations of the scientific holiday at Norwich seems to have been created by a lady on Tuesday. The Section of Economic Science is hardly the one in which we should expect a lady to shine, but Miss Becker took it by storm, and carried everything before her. The very title of her paper was a challenge. Its subject was a woman's rights and wrongs; but it ignored the very word woman, and boldly challenged the consideration of "*the supposed differences in the minds of the two sexes of man.*" Miss Becker pleaded for the equality of the two sexes, but she practically asserted the superiority of that "*sex of man*" to which she herself belongs. When Miss Becker concluded, a member of the other "*sex of man*"—Mr. Joseph Payne—naturally thought, that as his time had come, he might read his paper; but the crowded audience had been so excited by the vindication of the feminine intellect that the sterner sex had not a chance. The Section would not have even hurried extracts from Mr. Payne's paper: all that it would do was to discuss Miss Becker. Into this discussion both "*sexes of man*" seem to have entered warmly, but it ended in the entire rout of the advocates of feminine inferiority. Miss Becker claimed for her own "*sex of man*" quite equal faculties with the other sex, and she demanded for it an exactly similar training. She expressed a hope that the time would soon come when the needle would be as strange in the hand of a woman as a spinning-machine is in the present day. But Miss Becker is decidedly wrong. Each sex has its sphere, and in its sphere is first. That of woman is the affections, that of man is the reason, and nothing but confusion can come of claiming equality for both sexes in the sphere of either.

Russia in the Present Day.—As regards Russia, we may observe, before going further, that her relations to the rest of Europe have not been less affected by the events of the last few years than those of other States. Her position, both external and internal, is no longer such as it was before

the Crimean and Danish wars. She no longer exercises that mischievous and unwholesome power over Prussia and the small German States, which paralyzed their independence and destroyed the influence of the German race in the affairs of Europe for more than half a century. Such a state of things would be incompatible with a united Germany, with free German institutions, and with a Prussian policy no longer guided by family alliances and personal sympathies. On the other hand, a great national movement is unquestionably taking place in Russia; while intercourse with the rest of the world, and the influence of new ideas arising out of modern civilization, which even Russian despotism cannot prevent, are gradually leading to the diffusion of liberal opinions, and of views with regard to the rights of people and the duties of Governments, which must produce, sooner or later, vast changes in the political condition of Russia herself.—*St. Paul's.*

Enormous Head-Dresses.—With the commencement of the reign of George III. hair-dressing became an intricate and difficult science, and was made the subject of several elaborate publications. To raise up the lofty pile of hair, and fill it out with materials to give it due elasticity, to arrange the vast curls that flanked it, and to give grace to the feathers and flowers with which it was crowned, was not within the capacity of every vulgar *coiffeur*. The interior of the mass which rose above the head was filled with wool, tow, hemp, etc., and the quantity of pomatum, and other materials used with it, must have produced an effect calculated to disgust all who were not absolutely mad upon fashion. An ode to the ladies in 1768, printed in the "New Foundling Hospital for Wit," describes the lover's astonishment at his mistress's head-dress:

"When he views your tresses thin,
Tortured by some French friseur;
Horse-hair, hemp, and wool within,
Garnished with a diamond skewer;

"When he scents the mingled steam
Which your pestle'd heads are rich in,
Lard and meal, and clouted cream,
Can he love a walking kitchen?"

American Watches.—In no branch of manufactures has America competed more successfully with Europe than in that of watches and clocks.

The American Watch Company of Waltham, Mass., produces watches which, for durability, reliability as time-keepers, and perfection of finish, are unsurpassed in the world, while, as they are made altogether by machinery, they are decidedly cheaper than any imported ones. The thousands of them which are now in use, and their adoption on all the railways, attest their superior value.

Messrs. *Howard & Co.*, of this city, are now offering these watches at very low prices, and all who are contemplating purchases would do well to remember the name. The Gorham silver and silver plated ware, with a rare assortment of miscellaneous jewellery, will always be found at the store of this firm.

We would invite the attention of our readers to the advertisement of *Howard & Co.*, on third page of cover.

Sunset.—This is a new chromo just issued by L. Prang & Co., of Boston.

When we say that the painting, from which "Sunset" is copied, is by Bierstadt, that the scene is California, and that the chromo is by Messrs. Prang, the vocabulary of our praise is exhausted. No one who is conversant with the merits of the "Barefooted Boy," and other pictures published by this firm, will require any elaborate comment on this.

The original painting has already attracted some attention as one of Bierstadt's choicest "bits" of landscape. Mountain, and river, and trees, and sky, are presented in soft and delicious harmony, while the sinking sun throws a golden halo over all. No living thing disturbs the solitude of the scene, save a couple of water-fowl swooping low over the serene waters.

Naught but the hand of the artist can portray this hour of sunset,

"When color glows unglittering, and the soul of visible things shows silent happiness," words ever seem impotent and crude.

So much for the picture; now for the execution.

We think that "Sunset" is undoubtedly the best chromo yet issued. It is evidently brought out with great care, and is probably as nearly perfect as any mechanical process of painting can be.

We have already expressed our opinion as to the importance of chromo-lithography as an educational influence.

We know that it has become quite the thing among the champions of High Art to decry this process, and even to revile what are called "the pretensions" of Mr. Prang, but we can only reiterate what we have said in a former number, that chromo-lithography will be a powerful influence in popularizing the love of Art. Mr. Prang himself would, probably, be perfectly willing to admit that an original painting by a good artist is infinitely superior to any chromo, but these paintings are held at such prices as to place them entirely above the reach of the majority of the people. Many a man can afford to pay ten dollars for a chromo, which would be infinitely superior to any picture he may now possess, who would be wholly unable to pay a couple of hundred for an original painting.

It is to satisfy the wants of this large class that Mr. Prang has devoted himself, and we believe that he has done it well and conscientiously. That he does it to "make money" is no accusation at all; we discover that many artists paint pictures for the same purpose. The laborer is worthy of his hire, whether he labors in one branch of the art or in another, and if Mr. Prang has succeeded in satisfying a popular want, his success should surely not detract from his merit. We believe that Mr. Prang is developing a taste in the people which will ultimately redound to the benefit of the artists themselves, and the next generation of them will realize it.

We will send "Sunset" (price \$10) to any one who will send us five new subscribers to THE ECLECTIC MAGAZINE.



Engraved for the Eclectic by Perine & Giles NY.

BARON VON BEUST.